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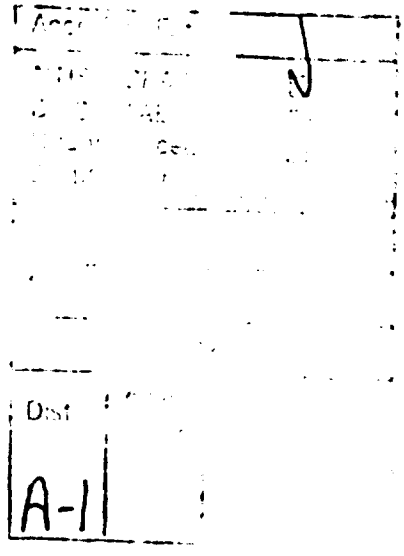
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OEA — 1
SAF/GC — 1
IIRC — 1
SAC — 1

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THE FOUR CORNERS REGIONAL COMMISSION

Second Quarterly Letter Report

for the period April 1, 1981 to June 30, 1981



Submitted to the
Department of Defense

and the

United States Air Force

Pursuant to Public Law No. 96-418
Section 801

UNANNOUNCED

DTIC QUALITY INSPECTED 2

Louis D. Higgs
Executive Director

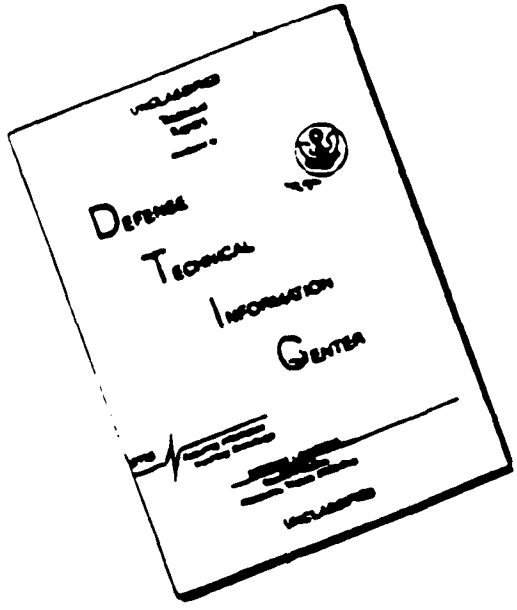
August 20, 1981

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DISCLAIMER NOTICE



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FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

August 20, 1981

Joe Meis, Principal Deputy Assistant
Secretary of the Air Force
Manpower, Reserve Affairs & Installation
The Pentagon
Washington, D.C. 20230

SUBJECT: SECOND QUARTERLY REPORT UNDER MX MISSILE MOA BETWEEN FOUR CORNERS REGIONAL COMMISSION AND THE UNITED STATES AIR FORCE DATED IN FEBRUARY, 1981

Dear Mr. Meis:

Transmitted herewith, are ten (10) copies of the Second Quarterly Reports from the Four Corners Regional Commission and the Four Grantees under the above subject MOA.

Please use this letter as our certification and assessments relative to the following requirements of the MOA:

1. To the best of our knowledge, all funds received to date have been disbursed in accordance with Section III of the MOA. (Please see copies of the Grants previously forwarded to you for reference.)

2. Enclosed herewith, are the monthly expenditure reports on our "Category" budget of $120,000.00 (Attachment A) for the period of April 1, 1981 thru June 30, 1981.

3. To the best of our knowledge, all funds are being administered in accordance with the applicable provisions of Chapter V, of Title 13, Code of Federal Regulations, and in particular, parts 520, 540 and 581, and all other applicable federal laws and regulations.

4. All Grants have provisions that mandate compliance with applicable federal cost principles and administrative requirements.

5. To the best of our knowledge, Grantees are conducting procurement actions in accordance with the provisions of 13 C.F.R. part 540. No sole-source justifications in excess of $100,000.00 have been presented to Four Corners Regional Commission.

6. To the best of our knowledge, all Grantees are continuing their coordination activities with the appropriate State MX Intergovernmental Working Groups. (See individual Grantee reports for specifics.)

7. To the best of our knowledge, the Draft Phase II Baseline Study Submitted by the MX Policy Board for our review, is the only Comprehensive Plan being finalized by any of the Grantees at this time.

8. All Grants require compliance with the provisions of A-95 and "N.E.P.A."

9. Programmatic and fiscal monitoring is being carried out by review and assessment of Quarterly Progress Reports as called for in each Grant agreement. Also, site trips are being conducted as deemed appropriate. No significant deviations or changes to approved work programs have been requested, nor does our review and assessment indicate that any are in order.

10. All travel appears to be in accordance with the applicable provisions of 13 C.F.R. part 540 or exceptions provided there-in relating to state or locally approved travel procedures.

11. No requests have been made by the Air Force to provide testimony before Congress regarding administration of funds.

12. Assessment statement (Attachment B) is included with the Progress Reports as shown in the Table of Contents.

13. To the best of our knowledge, records are being kept that will disclose the amount and disposition of all total budgeted funds, and access by the Secretary of the Air Force is being provided for in each Grant.

14. Department of Commerce auditors have contacted us relative to an acceptable audit plan for all FY 81 Grants. It is our understanding, that we will continue to use private independent auditors for final audits and that we will use our Business Manager to conduct interim audits with the Department of Commerce auditors providing quality control follow-up on all audits.

15. (a) Estimated amounts expended by Grantees are shown in their individual Progress Reports.

(b) Based upon our review and assessment of the Second Quarterly Progress Reports from the four Grantees, we do not find any inconsistency of expenditures with the approved Comprehensive Work Programs. Products submitted with each Grantees report appear to be appropriate in all cases, given the continuing lack of substantive information from the Air Force relative to a basing decision and a construction management plan.

We trust that you will find this report satisfactory in meeting our requirements under the provisions of the MOA, and your Quarterly Report Review Criteria. If there are any questions or if you feel we have overlooked any element of our reporting requirements, please do not hesitate to call us.

* * * * * * * * * * * * * * * * * * *

Certified true and correct to the best of our knowledge

Keith M. Dotson
Deputy Executive Director

Louis D. Higgs
Executive Director

KMD:cbk
Enclosures: (Original to Joe Meis)
cc: Federal Cochairman (1 copy of report)
Gary Vest (7 copies of report)
Lt. Col William Verkest (2 copies of report)

F.C.R.C. ADMINISTRATIVE BUDGET MONTHLY REPORT

FCRC
PROGRESS REPORT SHEET

30 April 1981
(For Period Ending)

MX MISSILE ADMINISTRATION
(Project Title)

5282-10
(FCRC Project No.)

Submitted to Four Corners Regional Commission

I. Cash Summary

Funds Beginning Reporting Period	FCRC Funds Received To Date	Applicant & Other Funds Received To Date	Less Disbursements	Equal Funds End of Period
$103,903.00			$5,678.00	$98,225.00

II. Payments and Encumberances

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column -
Salaries & Wages		$55,000.00		[illegible]		$14,409.00	
Fringe Benefits		$ 250.00		[illegible]		2,160.00	
Travel		26,400.00		1,-27.00		5,076.00	
Communications, Reproductions, Materials & Supplies		6,350.00		[illegible]		130.00	
Legal Services		3,000.00					
Audits		21,000.00					
TOTALS		$120,000.00		$ 1,[illegible]73.00		$21,775.00	

Attach additional pages if necessary.

PROGRESS REPORT BUDGET

May 31, 1981 (For Period Ending) | MX MISSILE ADMINISTRATION (Project Title) | 5282-10 (FCRC Project No.)

Submitted to Four Corners Regional Commission

I. Cash Summary

Funds Beginning Reporting Period	FCRC Funds Received To Date	Applicant & Other Funds Received To Date	Less Disbursements	Equal Funds End of Period
$98,225.00			$8,243.00	$89,982.00

II, Payments and Encumberances

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Salaries & Wages		$55,000.00		$4,348.00		$18,757.00	
Fringe Benefits		8,250.00		435.00		2,595.00	
Travel		26,400.00		2,934.00		8,010.00	
Communications & Reproduction Material and Supplies		6,350.00		526.00		636.00	
Legal		3,000.00					
Audits		21,000.00					
TOTALS		$120,000.00		$8,243.00		$30,018.00	

Attach additional pages if necessary.

6

PROGRESS REPORT BUDGET

June 30, 1981 (For Period Ending) | MX MISSILE ADMINISTRATION (Project Title) | 5282-10 (FCRC Project No.)

Submitted to Four Corners Regional Commission

I. Cash Summary

Funds Beginning Reporting Period	FCRC Funds Received To Date	Applicant & Other Funds Received To Date	Less Disbursements	Equal Funds End of Period
$89,982.00			$5,343.00	$84,639.00

II. Payments and Encumberances

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Salaries & Wages		$55,000.00		$4,088.00		$22,845.00	
Fringe Benefits		8,250.00		397.00		2,992.00	
Travel		26,400.00		358.00		8,368.00	
Communications, Reproduction Material & Supplies		6,350.00		500.00		1,156.00	
Legal		3,000.00					
Audits		21,000.00					
TOTALS		$120,000.00		$5,343.00		$35,361.00	

Attach additional pages if necessary.

June 30, 1981
(For Period Ending)

MX Missile Policy Board
Planning & Impact Mitigation Project
(Project Title)

6(MS)11-899-046-2
(FCRC Project No.)

Submitted to Four Corners Regional Commission

I. Cash Summary

Funds Beginning Reporting Period	FCRC Funds Received To Date	Applicant & Other Funds Received To Date	Less Disbursements	Equal Funds End of Period
225,000.00		450,000.00	156,952.28	293,047.72

II. Payments and Encumberances

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
PERSONNEL SERVICES							
Coordinator		36,000.00		9,000.00		9,000.00	25
Assistant Coordinator		30,000.00		7,500.00		7,500.00	25
Secretary		15,000.00		3,750.00		3,750.00	25
Part Time Temporary		10,000.00		200.00		200.00	2
Fringe Benefits		21,500.00		2,486.89		2,486.89	12
TRAVEL							
Travel/Staff		30,000.00		10,099.46		10,099.46	33.7

Attach additional pages if necessary.

FCRC
PROJECT BUDGET

REVISED # 4

11 Payments and Encumbrances -
Continued, Page 2 of 2

Project Name MX MISSILE ADMINISTRATION FCRC # 5282-10

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Salaries & Wages		$55,000.00		$3,674.00		$48,038.00	
Fringe Benefits		8,250.00		551.00		7,206.00	
Travel		26,400.00		1,427.00		5,076.00	
Communications, Reproductions, Materials & Supplies		6,350.00		26.00		130.00	
Legal Services		3,000.00					
Audits		21,000.00					
Total		$120,000.00		$5,678.00		$60,450.00	

Attach additional pages if necessary.

PROGRESS REPORT BUDGET

REPORT # 5

11. Payments and Encumberances - Continued, Page 2 of 2.

Project Name MX MISSILE ADMINISTRATION FCRC # 5282-10

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Salaries & Wages		$55,000.00		$4,348.00		$48,038.00	
Fringe Benefits		8,250.00		435.00		7,206.00	
Travel		26,400.00		2,934.00		8,010.00	
Communications, Reproduction Materials & Supplies		6,350.00		526.00		656.00	
Legal Services		3,000.00					
Audits		21,000.00					
		$120,000.00		$8,243.00		$63,910.00	

If additional pages are needed, ...

9.

II. Payments and Encumberances - Continued, Page 2 of 2

Project Name MX MISSILE ADMINISTRATION FCRC # 5282-10

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Salaries & Wages		$55,000.00		$4,088.00		$48,038.00	
Fringe Benefits		8,250.00		397.00		7,206.00	
Travel		26,400.00		358.00		8,368.00	
Communications & Reproduction Materials and Supplies		6,350.00		500.00		1,156.00	
Legal Services		3,000.00					
Audits		21,000.00					
		$120,000.00		$5,343.00		$64,768.00	

STATUS OF FUNDS FOR EACH STATE

STATUS OF DOD MX FY 81 FUNDS AS OF JUNE 30, 1981**

FCRC ACCOUNT NO.	ACCOUNT NAME	AMOUNT BUDGETED	ACCUMULATIVE AMOUNT OBLIGATED	AMOUNT EXPENDED THRU 6/30/81	UNOBLIGATED BALANCE
5282-10	FCRC Administrative Costs	$ 120,000.00	$ 64,768.00	$ 35,361.00	$ 55,232.00
5282-20	Nevada MX Missile Oversight Committee	$1,500,000.00	$1,125,000.00	$143,778.67	$375,000.00
5282-20	Nevada MX Missile Office	$1,000,000.00	$ 750,000.00*	$185,781.81	$250,000.00
5282-30	Utah MX Missile Impact Policy Board	$ 900,000.00	$ 675,000.00	$156,952.28	$225,000.00
5282-30	Utah MX Field Office	$ 600,000.00	$ 450,000.00*	$202,741.00	$150,000.00

* $120,000.00 for Administrative Costs have been charged to 5282-20 ($75,000) and 5282-30 ($45,000) during the First Quarter reporting period. These costs are included in the ACCUMULATIVE AMOUNT OBLIGATED column for these accounts.

** Actual obligations for Second Quarter Progress Report payments not actually processed until August 17, 1981.

FOUR CORNERS REGIONAL COMMISSION ASSESSMENT OF ALL GRANTEE'S

SECOND QUARTER FY 81 PROGRESS REPORT

Pursuant to Air Force Review Criteria for Quarterly Reports for Administration of Community Planning Funds During FY 81

A. Our anaylsis of the expenditures by all Grantee's for the Second Quarter of FY 81, indicates reasonable consistency with the approved Comprehensive Work Plan goals, objectives, tasks and products, given the late start-up due to uncertainty of FY 81 funding.

B. List of products completed during reporting period.

1. No "products" were completed by any of the Grantee's during this reporting period, unless you want to consider the State and Local comments of the Draft Environmental Impact Statement as a product.

   We understand that you have received adequate copies of the comments on the D.E.I.S. from both Nevada and Utah.

C. Obviously, progress on a number of goals, products and time schedules is still very much dependent upon decisions of the Air Force relative to a basing mode selection. Our assessment of the work reported in this Second Quarter Progress Report indicates that much of the delay in product delivery will be very much dependent upon timing of the Air Force's decision in the near future. The major problems identified in the Second Quarter of FY 81 is the uncertainty relative to the basing mode decision by the Air Force and the National Administration.

D. Please see the transmittal letter for this report that makes all certification required.

E. Copies of all significant correspondence with each of the Grantee's are included within the appropriate appendix of this report for each Grantee.

Also, copies of correspondence with individual Grantee's relative to our preliminary assessment of work performed in the Second Quarter, and our attempt to rectify stated deficiencies, are enclosed under the appropriate Grant appendices of this report.

CORRESPONDENCE ON QUALITY OF REPORT

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

August 17, 1981

Chad Johnson, Chairman
Utah MX Impact Policy Board
P.O. Box 503
Beaver, Utah 84713

SUBJECT: UTAH MX MISSILE POLICY BOARD PLANNING AND IMPACT MITIGATION
FCRC NO. (CMS)11-309-C46-2

Dear Chad:

The Second Progress Report on the above referenced project was received in this office and has been reviewed and accepted. The payment in the amount of $225,000.00 is now due. This payment was processed to Washington, D.C. on August 17, 1981. You will receive payment directly from that office.

If you have any questions or need further assistance, please contact this office.

Sincerely,

Keith M. Botson
Deputy Executive Director

KMD:clk
Enclosure
cc: Federal Cochairman
Ralph Starr
Dale Carpenter

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR - 2380 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

MEMORANDUM TO: Henry Wade
Commissions Accounting

FROM: Louis D. Higgs
Executive Director

SUBJECT: Project Name: UTAH MX MISSILE POLICY BOARD PLANNING AND IMPACT MITIGATION
Project No.: 6(MS)11-899-046-2
Document No.: 10150046
Grantee: UTAH MX MISSILE IMPACT POLICY BOARD
Appropriation No.:T/115/5282-30/52-00/250-01

DATE: August 17, 1981

Please obligate funds in the amount of $225,000.00.

As set forth in the terms of the Grant, I hereby authorize the Third Payment in the amount of $225,000.00 to be processed as follows:

Make Check Payable To: UTAH MX MISSILE IMPACT POLICY BOARD

Send Check
To The Attention Of: Chad Johnson, Chairman
Utah MX Impact Policy Board
P.O. Box 508
Beaver, Utah 84713

A copy of this memo is also enclosed to be sent with the payment.

* *

CERTIFICATION OF TECHNICAL PERFORMANCE

UTAH MX MISSILE IMPACT POLICY BOARD has provided satisfactory technical performance for completion of the above referenced project. This payment is consistent with all terms and conditions of the Grant.

Keith M. Dotson, Deputy Executive Dir.

8/17/81
Date Requested

Louis D. Higgs - Executive Director

8/17/81
Date Approved

cc: Federal Cochairman
Ralph Starr, Coordinator - Chad Johnson, Chairman
Dale Carpenter, Chairman

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2380 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

[redacted]

Phil Robison, Assistant Director
Utah MX Impact Policy Board
444 South Main, Suite A-1
Cedar City, Utah 84720

SUBJECT: ADDITIONAL REQUIREMENTS ON SECOND PROGRESS REPORT
[redacted]

Dear Phil:

This letter is to confirm our telephone conversation on July 27, 1981 in which I requested three (3) additional submissions on your Second Progress Report. They are as follows:

1) Certification that all terms and conditions of the grant awarded have been complied with, based upon information available to you.

2) A complete list of Contractor's, including names and addresses along with the amounts awarded, obligated and expended against each.

3) A Statement of Acknowledgment that you have constantly monitored the performance of any contractor's or subgrantee's to assure that time schedules are being met, projected work units by time periods are being accomplished and other performance goals are being achieved.

Please be sure that two signatures are on this certification.

Also, please make note that these submissions will become requirements on all subsequent progress reports.

If you have any questions or need further assistance, please feel free to call this office at anytime.

Sincerely,

Carol Beth Kent

Carol Beth Kent
Project Assistant
for MX Administration

CBK
cc: Federal Cochairman
Dale Carpenter

bcc: fcc/chron/[redacted]reading

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

June 19, 1981

Chad Johnson, Chairman
Utah MX Missile Impact Policy Board
c/o Beaver County Courthouse
Beaver, Utah 84713

SUBJECT: UTAH MX MISSILE IMPACT POLICY BOARD
FCRC NO. 6(MS)11-s(1)- .7-2

Dear Chad:

This will serve as a reminder that the Second Progress and Financial Report on the above-captioned project will be due in this office on July 1, 1981.

Please refer to Article VII - Monitoring and Reporting, of the Terms and Conditions, of the Grant for the information that is required in this report and the manner in which it should be submitted.

We are enclosing a Guide for Progress Reports and a Progress Report Budget Format to assist you in submitting the required information in the appropriate manner. We would like the enclosed guides to be used in preparing your progress and expenditure reports. If you have any questions regarding the enclosed material, please contact this office.

Upon receipt and acceptance of this report, we will process the payment in the amount of $225,000.00 in accordance with the terms of the Grant. If for any reason, you anticipate that this report will be delayed, please contact this office as soon as possible. Unless we hear from you, we will assume that you will comply with the report due date as stipulated in the Grant.

We look forward to receiving this report.

Sincerely,

Carol Beth Kent
Project Assistant
for MX Administration

CBK
Enclosure
cc: Federal Cochairman
Ralph Starr

bcc: fcc/chron/file/reading

CERTIFICATION OF PERFORMANCE

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

August 13, 1981

Mr. Keith Dotson
Office of the Executive Director
Four Corners Regional Commission
2350 Alamo S.E., Suite 303
Albuquerque, New Mexico 87106

SUBJECT: FCRC GRANT #6(MS)11-899-046-2
SECOND PROGRESS REPORT

Dear Mr. Dotson:

Pursuant to the delegation of authority from the MX Missile Policy Board to the undersigned to be "principally responsible for performance of the grant", I hereby certify that all terms and conditions of the grant awarded have been complied with, based upon information available to me.

Sincerely,

H. R. Starr, Director
MX Missile Policy Board

APPROVED:

Chad W. Johnson, Chairman
MX Missile Policy Board

STATEMENT OF ACKNOWLEDGMENT

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

MEMO

FROM: H. R. Starr, Director
MX Missile Policy Board

TO: Keith Dotson
Four Corners Regional Commission

DATE: August 5, 1981

RE: Statement of Acknowledgment of Performance

We the undersigned herein acknowledge and attest that we have constantly and effectively monitored the performance of any and all contractors or subgrantees under agreement with the MX Missile Policy Board funded by FCRC Contract #6(MS)11-899-046-2 to assure that time schedules are being met, that projected work units by time periods are being accomplished and that all other performance goals are being achieved.

H. R. Starr
MX Policy Board Director

Chad W. Johnson
MX Policy Board Chairman

Witness

8-5-81
Date

FUNDING OF THIS GRANT WAS PROVIDED BY

THE FOUR CORNERS REGIONAL COMMISSION

STATUS ON SUBCONTRACTS

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

August 5, 1981

Mr. Keith Dotson
Four Corners Regional Commission
Office of the Executive Director
2350 Alamo S.E., Suite 303
Albuquerque, New Mexico 87106

REFERENCE: MX MISSILE POLICY BOARD
UTAH MX PLANNING & IMPACT MITIGATION GRANT
FCRC #6(MS)11-899-046-2
SPECIAL REPORT

Dear Mr. Dotson:

Please find enclosed a complete list of consultants under contract with the MX Missile Policy Board during FY 1981. The expenditure summary and report covers the period April 1, 1981 through July 31, 1981. The following is a list of consultants contracted with during this period by name and address:

1. Five County Association of Governments
   P.O. Box "O"
   St. George, Utah 84770
   UMXIPB-001
   UMXIPB-009
   UMXIPB-010

2. Six County Commissioners Organization Office of Community and Natural Resources Planning
   P.O. Box 725
   Richfield, Utah 84701
   UMXIPB-003

3. Mountain West Associates, Ltd.
   1229 19th Street, N.W.
   Washington, D.C. 20036
   UMXIPB-004

4. John M. Sanger Associates, Inc.
   2340 Market Street
   San Francisco, CA 94114
   UMXIPB-005

5. APA Associates
   182 South 600 East, Suite 200
   Salt Lake City, Utah 84102
   UMXIPB-006

6. John Short & Associates, Inc.
   Boston Building
   9 Exchange Place, Suite 920
   Salt Lake City, Utah 84111
   UMXIPB-007

7. Peat, Marwick, Mitchell & Company
   1990 K. Street, N.W.
   Washington, D.C. 20006
   UMXIPB-008

8. Dr. Paul Cox
   448 East 400 South, Suite 103
   Salt Lake City, Utah 84111
   UMXIPB-011

If you have additional questions concerning this report or format, please so advise. You have in your possession copies of all above referenced agreements.

Sincerely,

Phillip B. Robison
Assistant Director
MX Missile Policy Board

PBR:dl
Enclosure
cc: Ken Olson

July 31, 1981

MX MISSILE POLICY BOARD

CONTRACT LIST & EXPENDITURE SUMMARY

FISCAL YR 1981 FCRC CONTRACT #6(MS)11-899-046-2

CONTRACTOR	TOTAL CONTRACT AMOUNT	POLICY BOARD PROPORTION	STATE OFFICE PROPORTION	EXPENDED 1980 BUDGET	EXPENDED 1981 POLICY BRD.	EXPENDED 1981 STATE O.	BALANCE ENCUMBERED 1981 POLICY BRD.	BALANCE ENCUMBERED 1981 STATE O.	EXPEND & ENCUMB RED POLICY BOARD	EXPENDED & ENCUMBERED STATE OFFICE	TOTAL EXPENDED & ENCUMBERED	COMPLETION TERMINATION DATE
FIVE COUNTY ASS OF GOVERNMENTS UMXIPB - 001	6000000	6000000		4500000			1500000		6000000		6000000	06/30/81
SIX COUNTY COMMISSIONERS ORG. UMXIPB - 003	4000000	4000000		1000000	2000000		1000000		4000000		4000000	07/30/81
MOUNTAIN WEST ASSOCIATES UMXIPB - 004 (Coop.)	3000000	1500000	1500000		707654	668653	811846	811847	1519500	1480500	3000000	12/30/81
JOHN M. SANGER ASS. INC. UMXIPB - 005 (Coop.)	1500000	750000	750000		350000	350000	400000	400000	750000	750000	1500000	03/30/81
APA ASSOCIATES UMXIPB - 006	6500000	6500000			2000000		4500000		6500000		6500000	12/31/81
JOHN SHORT & ASSOCIATES, INC. UMXIPB - 007 (Coop.)	4000000	3300000	700000		1230000	270000	2070000	480000	3300000	700000	4000000	08/31/81
PEAT, MARWICK, MITCHELL & CO. UMXIPB - 008 (Coop.)	3400000	1700000	1700000		750000	750000	950000	950000	1700000	1700000	3400000	08/31/81
FIVE COUNTY ASS OF GOVERNMENTS UMXIPB - 009	6300000	6300000			3000000		3300000		6300000		6300000	12/31/81
FIVE COUNTY ASS OF GOVERNMENTS UMXIPB - 010	1900000	1800000			1000000		800000		1900000		1800000	12/31/81
DR. PAUL COX UMXIPB - 011 (Coop.)	600000	300000	300000				300000	300000	300000	300000	600000	08/07/81
TOTALS 31JULY81	37100000	32150000	4950000	5500000	11037654	2039653	15681846	2891947	32167500	4930500	39100000	

(Coop.) = Cooperative Agreement between State MX Coordination Office and the MX Policy Board

PROGRESS REPORT

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

RECEIVED
JUL 22 1981
FOUR CORNERS REGIONAL COMMISSION
ALBUQUERQUE, NEW MEXICO

MEMO

FROM: Dale Carpenter
Utah State Management Committee for MX

FCRC CONTRACT
#6(MS)11-899-046-2

TO: Keith Dotson
Albuquerque FCRC

DATE: July 9, 1981

RE: Expenditure Certification and Authorization

This is to advise that this office has reviewed the enclosed invoice dated July 9, 1981 for the third payment in the total amount of $225,000.00 in accordance with Exhibit "C" - Payment Schedule.

Approval and processing is hereby requested.

Description of Expenditures
(See detail on attached sheets)

Totals:	
Professional Services	$ 22,936.89
Travel	$ 17,179.91
Other	$ 116,835.48
Total	$ 156,952.28

Through June 30, 1981

Contract Summary

Totals:	
Contract	$ 900,000.00
Prior Reimbursements	$ 450,000.00
Reimbursement Requested	$ 225,000.00
Remaining Balance	$ 225,000.00

I hereby certify that the above billing is true and correct, and no portion thereof has previously been paid by the Four Corners Regional Commission.

H.R. Starr
MX Policy Board Director

APPROVED:

Dale Carpenter
State MX Management Committee

OR

Governor's Authorization

FUNDING OF THIS GRANT WAS PROVIDED BY

THE FOUR CORNERS REGIONAL COMMISSION

June 9, 1981

FOUR COUNTY MX IMPACT POLICY BOARD

APRIL-JUNE, 1981 SECOND QUARTER PROGRESS REPORT

CONTRACT #6(MS)11-899-046-2

July 1, 1981

INTRODUCTION

This Second Quarter Progress Report covers the period of the above referenced grant from April 1 through June 30, 1981. As required by the grant, the format of this report conforms with the guidelines provided by Four Corners Regional Commission suggesting a reporting system that addresses the following goals:

Goal I - Liaison, Coordination and Program Management

Goal II - Impact Analysis

Goal III - Impact Mitigation and Development Planning

Each goal will be analyzed by effort to date on tasks or tasks completed through the second quarter of the FY 81 Work Program.

Goal I - Liaison, Coordination and Program Management

Task 1.1 Coordinate Local DEIS Review

The DEIS review process has been completed on the local level and the comments on the MX DEIS and ETRs are enclosed.

Task 12. Citizen Advisory Committees

As reported in the First Quarter Report for 81, thirteen standing Citizen Advisory Committees have been formed in the topical areas: (1) Rapid, Large-Scale Growth, (2) Energy & Nonrenewable Resources, (3) Manpower & Employment, (4) Health & Social Services, (5) Land Use & Rights (includes transportation), (6) Geology & Minerals, (7) Recreation, (8) Water Resources, (9) Agriculture, (10) Wildlife Resources, (11) Native American, (12) Public Safety, and (13) Cultural Resources.

A fourteenth Advisory Committee has been formed titled the Educational Advisory Task Force and is meeting on a regularly scheduled basis. See Attachment - Education Task Force.

All Citizen Advisory Committees will begin participation in the planning process during the Third Quarter of 81. Decisions to be made by the Reagan Administration during the month of August will greatly influence the degree of activity and participation on the part of the Citizen Advisory Committees in the mitigation process.

Task 1.3 Hire Assistant MX Director

On February 16, 1981, Phillip B. Robison assumed the duties of Assistant Director. Robison, since assuming this position has formulated formal accounting and procurement policies, travel policies, personnel policies, and contracted professional and personal services policies.

Robison has computerized the accounting system of the MX Policy Board and has initiated and is publishing a semi-monthly newsletter for public information purposes.

One of Robison's principal responsibilities is liaison work with local government jurisdictions. He and Director Starr have met with over 30 such organizations since Robison assumed his office. (See attached calendars)

Robison holds Bachelor Degrees in Political Science (state and local government) and Economics, and a Masters Degree in Business Administration.

Task 1.4 Expand Office Capabilities to Disseminate Information

In addition to upgrading copying, telecopying, postage, and other office equipment, the office has obtained through rental an IBM word processor. The new word processor will be on line during the first part of July and will greatly increase this office's capability to disseminate information. The acquisition of a word processor should allow this office to prepare a much larger share of its printed deliverables in house.

Task 1.5 Life Support and Comprehensive Base Planning Task Force Membership

Chairman Chad Johnson and Director Ralph Starr attended the Base Comprehensive Planning Coordination Meeting at Norton Air Force Base, CA on June 23rd and 24th to discuss issues relating to the siting of a Utah MX Operating Base. The primary purpose of the meeting was to discuss siting alternatives within the Milford and Beryl suitability zones. Evaluation factors considered were:

a. Specific exclusionary factors which may eliminate some areas from consideration for operational, geotechnical and/or environmental reasons.

b. Avoidance/mitigation factors due to existing conditions which present a siting conflict.

c. Operational, environmental, socioeconomic, and other quality of life objectives.

Base Comprehensive Planning Meetings have been conducted on numerous occasions and these meetings have been attended by Policy Board personnel. Note attached copies of local comments adressing various siting proposals and deployment issues.

Planning has concentrated on the siting options of Beryl and Milford. Other siting alternatives i.e., Delta are being analyzed by the Board under separate studies. The lack of a presidential decision or direction concerning the entire MX Missile Weapons System and deployment mode issue has been a very real stumbling block to the planning effort.

Task 1.6 Development of Utah MX Legislative Requirement

This task has been scoped for the 3rd and 4th quarter of the Work Plan.

Task 1.7 Participation in the Development of Community Impact Assistance

Board Chairman Chad Johnson and Director Ralph Starr met in Washington, D.C. during the week of June 8th with congressional delegations from Utah and Nevada, the Office of Economic Adjustment, the Air Force, and others regarding

the proposed community impact assistance block grant legislation. The Senate Armed Services Committee reported the legislative draft out of committee verbatim (See attached copy). The Director will now concentrate his efforts in the House of Representatives to promote the timely review and acceptance of the community impact assistance bill.

Task 1.8 Representation on the Utah Intergovernmental Working Group

The Director and Chairman have attended all State Intergovernmental Working Group Meetings held during the 2nd Quarter.

Policy Board Chairman Johnson serves as the Chairman for the Utah Intergovernmental Working Group on a rotating basis-every other meeting. Policy Board staff furnish the agendas for these meetings and publish minutes for same. (See attached copies of agendas and minutes.)

Daily contact to exchange information and for coordination purposes takes place with Utah MX Coordination Office staff. Extensive use is also made of the mail service to promote the efforts of the two offices.

The local MX Policy Board enjoys an excellent working relationship with it's state counterpart. See the following roster of meetings held jointly by state and local MX staff offices during the 2nd quarter period for coordination purposes.

Date	Place
April 3, 1981	Cedar City, Utah
April 9, 1981	Salt Lake City, Utah
April 13, 1981	Cedar City, Utah
April 22, 1981	Salt Lake City, Utah
April 23, 1981	Cedar City, Utah
May 5, 1981	Las Vegas, Nevada
May 11, 1981	Washington, D.C.
May 15, 1981	Milford, Utah

Date	Place
May 19, 1981	Washington, D.C.
May 21, 1981	Salt Lake City, Utah
May 22, 1981	Salt Lake City, Utah
May 28, 1981	Cedar City, Utah
June 5, 1981	Salt Lake City, Utah
June 16, 1981	Salt Lake City, Utah
June 23, 1981	Salt Lake City, Utah
June 24, 1981	Norton Air Force Base, CA

Goal II - Impact Analysis

Task 2.1 Phase I Baseline Study

As indicated in the 1st Quarter Progress Report, the Phase I Study has been published and distributed to local government jurisdictions, state agencies, etc. The study is currently being used as a data base for advanced studies and analysis.

Task 2.2 Phase II Comprehensive Impact Analysis

The Phase II impact study (small operating base near Milford) has been completed in rough draft (see attached copy). This first draft has been distributed to local governments, planning commissions, etc., for review and comment. See attached comments and meeting attendance roster.

Work is continuing on Phase II-B (a small operating base near Delta) and is on schedule. See the attached draft copy of the Phase II-B preliminary data base study.

Task 2.3, 2.4, & 2.5 Update or Complete Comprehensive Master Plans; Develop or Revise Zoning Ordinances; and Respond to Local Requests for Special Studies in the Deployment Area

MX Policy Board staff, in conjunction with APA Associates and the Five County Association of Governments, is in the process of updating local government

master plans, land use ordinances, and controls to reflect potential MX related growth. Executed contracts between the MX Policy Board and APA Associates, and between the Board and the Five County Association of Governments have been forwarded to the Four Corners Regional Commission and these contracts have been reviewed and approved.

1. These studies will assess the capabilities of individual communities to implement comprehensive planning related to MX growth and impacts.
2. A complete review of master plans and land use ordinances will be made and specific recommendations pertaining to needs and potential problems will be identified. Issues such as conflicts in zoning policies between communities and counties, the effectiveness of land use regulations, duplication of public facilities, cost/benefits of growth management cooperation, etc., will be addressed.

Task 2.6 Joint Fiscal Impact Study

The MX Policy Board in a cooperative effort with the Utah MX Coordination Office has contracted with John M. Sanger Associates, Inc. to perform a local fiscal management reconnaissance. This initial study will:

1. Assess the analytical capabilities and adequacy of data possessed by local governments in the MX impact zone.
2. Identify the strengths and weaknesses in planning and analytical efforts to date relevant to preparation of a thoroughly documented fiscal impact analysis to be completed by early 1982.
3. Prepare a work program for the future, encompassing the tasks required to produce a fiscal impact analysis.
4. Identify the needs for consulting assistance, and the appropriate roles to be played by local officials and consultants.

Task 2.6 is a 3rd and 4th quarter objective. A copy of the executed Sanger Associates contract has been reviewed and approved by the FCRC. No special problems are anticipated.

Task 2.7 PHASE III

Scoping the Phase III is a 3rd and 4th quarter task. A concern of the Policy Board and a major deterrent and obstacle to the completion of this task is the failure of the Air Force and the COE to release their Construction Management Plan.

The entire planning and mitigation effort is hindered by the lack of reliable information concerning construction figures.

Task 2.8 DEIS

Task 2.8, DEIS review has been completed and the product comments on the MX DEIS and ETRs have been distributed. (See attached copies)

Goal III - Impact Mitigation & Development Planning

Task 3.1 803 Study

Local input on the 803 Study has been completed. The study containing input from state and local government has gone from OEA via OMB and the White House to Congress where it is currently being reviewed. Several trips to Washington, D.C. have been made to provide local input. (See schedule of meetings below.)

Task 3.2 Impact Funding

As indicated earlier in the body of this report, the Utah/Nevada legislative proposal for impact funding, the locally preferred 803 alternative, has been reported out of the Senate Armed Services Committee in tact and will now be debated in the House. The following is a roster of meetings attended to provide local input into the legislative process dealing with 803 impact funding.

Date	Place
April 3, 1981	Washington, D.C.
May 5, 1981	Las Vegas, Nevada
May 11, 1981	Washington, D.C.
May 19, 1981	Washington, D.C.

Date	Place
June 11, 1981	Las Vegas, Nevada

A study now under way by Board staff, working with the firm of Peat, Marwick, Mitchell & Company, is examining and analyzing the issue of fiscal management of mitigation funding. The contract, which has been submitted to the FCRC for review and has been approved by that body, is a joint venture and cooperative effort between the Board and the Utah MX Coordination Office. The study is focusing on:

1. Alternative means of funding impact assistance such as block grant aid to the impact area and funding through various federal departments and agencies.
2. The study will also produce a recommendation for a multi-project fiscal management and accounting system and the cost data required by such a system.

Task 3.3 Local Facilities and Service Plans

MX Policy Board staff has made contact with service providers in the region and discussions with these agencies are underway to assess their needs for funds to develop facilities and service plans to accommodate MX related population growth. (See attached letters)

The Southwest Health District, Region Five Family Services, the Utah Health Systems Agency, and other special service districts will be involved in the planning effort. This task is proceeding on schedule. No problems are currently anticipated. Task 3.3 is a 3rd and 4th quarter objective.

Task 3.4 Erosion of Local Tax Bases Study

John Short & Associates have been retained by the Board to examine alternatives for the mitigation of the erosion of local tax bases by the deployment of a tax exempt federal weapons system.

1. The study will inventory local revenue structures, taxing entities, and existing impact reports.
2. Existing constraints to modifying/expanding/pooling local revenues are being examined.
3. Consequences of local tax structures due to MX deployment are being identified and revenue gaps are being defined.
4. Extensive effort will concentrate on "gap financing" alternatives.

Task 3.5 FY 1982 Work Plan and Budget

Members of the MX Policy Board and staff will meet with the staff of the Utah MX Coordination Office July 6th and 7th to commence the development of the 1982 Work Plan and Budget. A proposed budget has been completed and forwarded to Washington, D.C. for the consideration of those interested.

The MX Policy Board and the Utah MX Coordination Office through the use of cooperative agreements are working closely together to identify relevant planning efforts, to coordinate planning, and to eliminate duplication of effort where possible.

A major concern for management in relation to the 1981 Work Plan and Budget has been and continues to be the incompatible timing between the initiation and performance of tasks and the receipt of funds to support those activities. More coordination is required to alleviate this difficulty.

ATTACHMENTS A-C

ATTACHMENT A

PROGRESS REPORT BUDGET

PROGRESS REPORT BUDGET

REPORT # 2nd Quarter

II. Payments and Encumberances - Continued, Page 2 of 2.

Project Name MX Missile Policy Board Planning & Mitigation FCRC # 6(MS)11-899-046-2

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Travel/Board		30,000.00		7,080.45		7,080.45	24
OPERATING EXPENSE							
Office Equipment & Rental		10,000.00		3,477.71		3,477.71	34.8
Office Rental		4,000.00		900.00		900.00	22.5
Office Supplies		5,000.00		926.25		926.25	13.7
Printing		6,000.00		1,491.47		1,491.47	24.9
Telephone		7,000.00		1,757.16		1,757.16	25.1
Postage		5,000.00		300.00		300.00	6
Conference Expense		4,000.00		243.78		243.78	3.3
Publication Acquisition		1,000.00		662.33		662.33	66.2
Misc. Expense (No Longer Used)		1,500.00		271.47		271.47	18.1
Contracted Studies		684,000.00		106,805.31		106,805.31	15.6
TOTALS		727,500.00		156,952.28		156,952.28	17.4

Attach additional pages if necessary.

ATTACHMENT B

QUARTERLY TIME SHEETS

QUARTERLY TIME SHEET
H.R. STARR

Month of April

April 1st 8 hours	Met with SUSC President in A.M., EDAW consultants in P.M. DEIS Hearing in Milford in evening.
April 2nd 8 hours	Radio talk show in St. George in A.M. Travel to Las Vegas in P.M.
April 3rd 10 hours	Travel and meetings in Washington, D.C.
April 4th 8 hours	Washington, D.C. Meetings
April 5th 7 hours	Washington, D.C. - Return to Utah
April 6th 8 hours	Caught up on telephone calls and correspondence
April 7th 6 hours	Worked MX consumer fraud problem with local and state agencies.
April 8th 10 hours	Met with Cedar City Corporation and Iron County Officials in A.M. Attended Five County Association of Governments Steering Committee Meeting in Beaver in P.M.
April 9th 8 hours	Travel and Meetings with State officials in Salt Lake City.
April 10th 6 hours	Return from Salt Lake City and return telephone calls in late P.M.
April 13th 8 hours	Caught up on correspondence in A.M. P.M. Meetings with Ken Olson and District Five UDOT Staff.
April 14th 6 hours	Meeting with Cedar City Planning Commission, Cedar City Corporation Staff and BLM Staff.
April 15th 8 hours	Work on Revised Quarter and Final Reports to FCRC. Evening meeting with Parowan Planning Commission.
April 16th 7 hours	Continued work on FCRC Reports.
April 17th 4 hours	Work on Newsletter
April 20th 6 hours	Caught up on telephone calls and correspondence.

Month of April Continued

April 21st 8 hours	A.M. work on FCRC Reports. P.M. travel to Salt Lake City.
April 22nd 10 hours	State MX Working Group Meeting. Travel to Nephi City Council Meeting and back to Salt Lake City.
April 23rd 12 hours	Return to Cedar City from Salt Lake City and on to Beaver for Policy Board Meeting in P.M.
April 24th 8 hours	Caught up on telephone calls and correspondence in A.M. P.M. meeting in St. George with Southwest Education Development Center Officials.
April 27th 6 hours	Revised Phase II Study Rough Draft
April 28th 8 hours	Meeting with Cedar City Corporation, Brian Head Town, and Office of Economic Adjustment Staff.
April 29th 8 hours	Developed proposals for Iron and Beaver County MX Planning Studies.
April 30th 8 hours	A.M. work on Iron and Beaver County Studies. P.M. meeting with new Dixie College President.

Month of May

May 1st 4 hours	A.M. meeting with FCAOG Planners
May 4th 8 hours	A.M. caught up on calls and correspondence. P.M. travel to Las Vegas.
May 5th 10 hours	Meeting on Community Impact Assistance Legislation at Las Vegas City Offices. Return to Cedar City in Evening.
May 6th	Ill
May 7th 8 hours	Meeting with FCAOG Planners. Finalization of planning process for Iron and Beaver Counties with consultants and staff.
May 8th 4 hours	Caught up on calls and correspondence.
May 10th 5 hours	Travel to Las Vegas
May 11th 10 hours	Travel and meetings in Washington, D.C.
May 12th 6 hours	Washington, D.C. meetings

Month of May Continued

May 13th 10 hours	Return from Washington, D.C.
May 14th 8 hours	Caught up on calls and correspondence in A.M. Meetings with EDAW Base Comprehensive Planning Consultants.
May 15th 6 hours	Meetings in Milford with local ranchers and Air Force. Siting meeting with State and Local Staff and area citizens.
May 17th 6 hours	Travel to San Francisco
May 18th 10 hours	Base Comprehensive Planning Meeting and return travel from San Francisco.
May 19th 6 hours	Caught up on calls and correspondence.
May 20th 8 hours	A.M. work on Phase II Document. P.M. meeting in Milford to report study to local officials from Iron and Beaver Counties.
May 21st 8 hours	Travel to and meetings with Six County Commissioner Organization Staff and Juab County Planning Staff.
May 22nd 10 hours	Meeting with Ken Olson and Consultant in Salt Lake City. Attended Air Force Siting Meeting at State Capitol. P.M. meeting in Delta with Local Officials and return to Cedar City.
May 25th	Memorial Day Holiday
May 26th 10 hours	Travel to and meetings with FCRC Staff in Albuquerque.
May 27th 8 hours	Return to Las Vegas. Meeting with Las Vegas City and Clark County Staff and return to Cedar City.
May 28th 8 hours	State Working Group and Local Policy Board Meetings in Cedar City.
May 29th	Caught up on calls and correspondence.

Month of June

June 1st 8 hours	Completed revised reports for FCRC
June 2nd 8 hours	A.M. work on new consultant contracts. P.M. meeting in St. George with FCAOG staff.

Month of June Continued

June 3rd 8 hours	A.M. meeting with Major McMains. P.M. work on contracts.
June 4th 8 hours	A.M. work on contracts. P.M. meeting with President of SUSC and staff.
June 5th 6 hours	A.M. finished consulting contracts. P.M. travel to and meeting with Kane County Officials in Kanab.
June 7th 10 hours	Travel to Las Vegas and Washington, D.C.
June 8th 6 hours	Washington, D.C. meetings
June 9th 6 hours	Washington, D.C. meetings
June 10th 6th	Washington, D.C. meetings
June 11th 10 hours	Return to Cedar City from Washington, D.C. via Las Vegas.
June 12th	Caught up on calls and correspondence.
June 15th 8 hours	A.M. meeting with Five County AOG staff and John Sanger consultant. P.M. travel to Beryl, Cedar City, Milford, and Richfield.
June 16th 9 hours	Travel and meetings with John Sanger and state agencies staff in Salt Lake.
June 17th 8 hours	A.M. return to Cedar City. P.M. meeting with London Newspaper Man, David Sheers.
June 18th 8 hours	Caught up on calls and correspondence.
June 19th 4 hours	A.M. confirming that all consultants had accepted contracts.
June 22nd 4 hours	Preliminary work on July 1st Progress Report.
June 23rd 8 hours	Travel to Salt Lake City and Ontario California.
June 24th 10 hours	Base Comprehensive Planning Meeting at Norton, AFB and return to Cedar City.
June 25th 8 hours	Day spent with Peat, Marwick, Mitchell & Company-consultant in deployment area.

Month of June Continued

June 26th 4 hours	Caught up on calls and correspondence and meeting with SUSC MX Committee Staff.
June 29th 7 hours	Work on July Progress Report for FCRC.
June 30th 6 hours	Continued work on July Progress Report.

MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Diane Lamoreaux

TITLE Secretary, MX Policy Board

MONTH June, 19 81

1	2	3	4	5	6	7
8hrs	8hrs	8hrs	8hrs	8hrs		
8	9	10	11	12	13	14
8hrs	8hrs	8hrs	8hrs	8hrs		
15	16	17	18	19	20	21
8hrs	8hrs	8hrs	8hrs	8hrs		
22	23	24	25	26	27	28
8hrs	8hrs	8hrs	8hrs	8hrs		
29	30	31				
8hrs	8hrs	8hrs				

I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Diane Lamoreaux

EMPLOYEE SIGNATURE

H. R. Stout

SUPERVISOR SIGNATURE

A - ANNUAL LEAVE
S - SICK LEAVE
F - FUNERAL LEAVE
H - HOLIDAY
M - MILITARY LEAVE
LW - LEAVE WITHOUT PAY
JC - JURY AND COURT LEAVE
AW - ABSENT WITHOUT LEAVE

NOTE: PLEASE SUBMIT 2ND COPY TO THE ASSISTANT DIRECTOR AT THE END OF EACH MONTH PROPERLY SIGNED.

MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Diane Lamoreaux

TITLE Secretary, MX Policy Board

MONTH May, 19 81

1	2	3	4	5	6	7
8 hrs			8 hrs	8hrs	8hrs	8hrs
8	9	10	11	12	13	14
8 hrs			8hrs	8hrs	8hrs	8hrs
15	16	17	18	19	20	21
8hrs			8hrs	8hrs	8hrs	A
22	23	24	25	26	27	28
8hrs			H	8hrs	8hrs	10hrs
29	30	31				
8hrs						

I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Diane Lamoreaux

EMPLOYEE SIGNATURE

H. F. Stay

SUPERVISOR SIGNATURE

A - ANNUAL LEAVE
S - SICK LEAVE
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NOTE: PLEASE SUBMIT 2ND COPY TO THE ASSISTANT DIRECTOR AT THE END OF EACH MONTH PROPERLY SIGNED.

MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Diane Lamoreaux

TITLE Secretary, MX Policy Board

MONTH April, 19 81

1	2	3	4	5	6	7
8hr	8hr	8hr	X	X	8hr	8hr
8	9	10	11	12	13	14
8hr	8hr	8hr	X	X	8hr	8hr
15	16	17	18	19	20	21
8hr	8hr	8hr	X	X	8hr	8hr
22	23	24	25	26	27	28
S	11 hr	8H	X	X	8hr	8hr
29	30	31				
8hr	8hr	X				

I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Diane Lamoreaux

EMPLOYEE SIGNATURE

H. R. Stark

SUPERVISOR SIGNATURE

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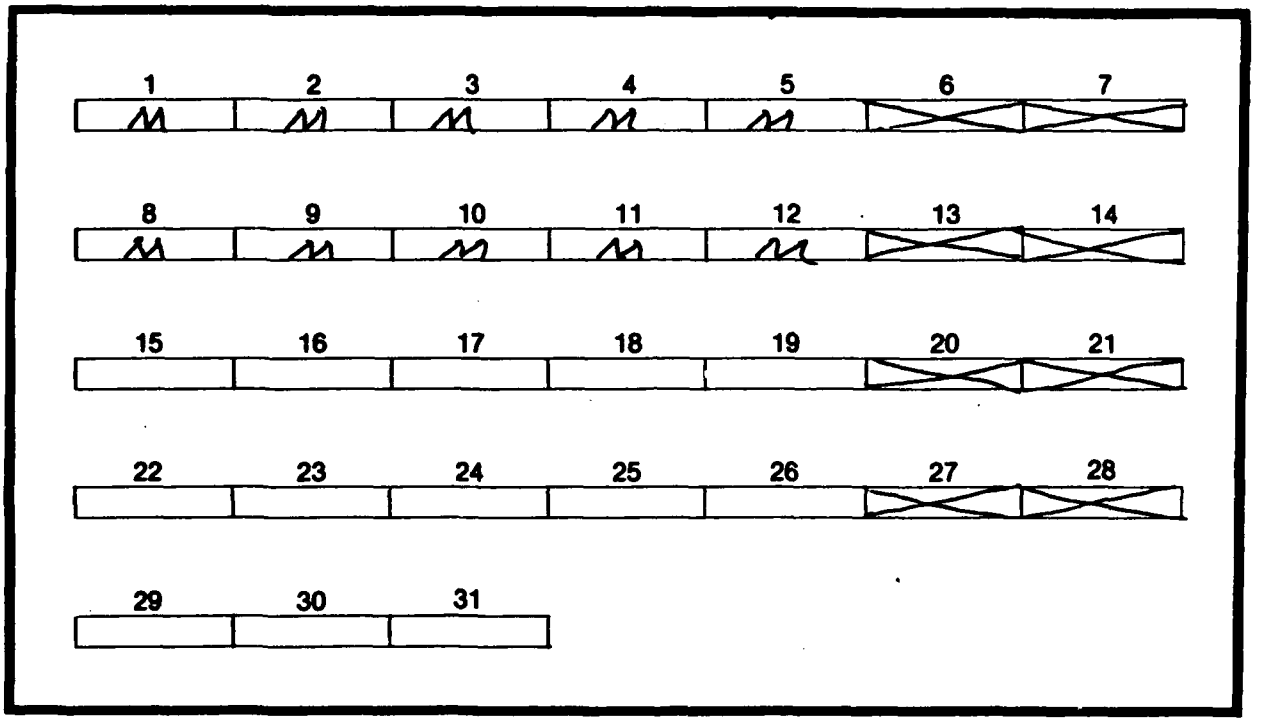
MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Phillip B. Robison

TITLE Assistant Director, MX Policy Board

MONTH June, 19 81



I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Phillip B Robison

EMPLOYEE SIGNATURE

H. R. Stark

SUPERVISOR SIGNATURE

A - ANNUAL LEAVE	M - MILITARY LEAVE
S - SICK LEAVE	LW - LEAVE WITHOUT PAY
F - FUNERAL LEAVE	JC - JURY AND COURT LEAVE
H - HOLIDAY	AW - ABSENT WITHOUT LEAVE

NOTE: PLEASE SUBMIT 2ND COPY TO THE ASSISTANT DIRECTOR AT THE END OF EACH MONTH PROPERLY SIGNED.

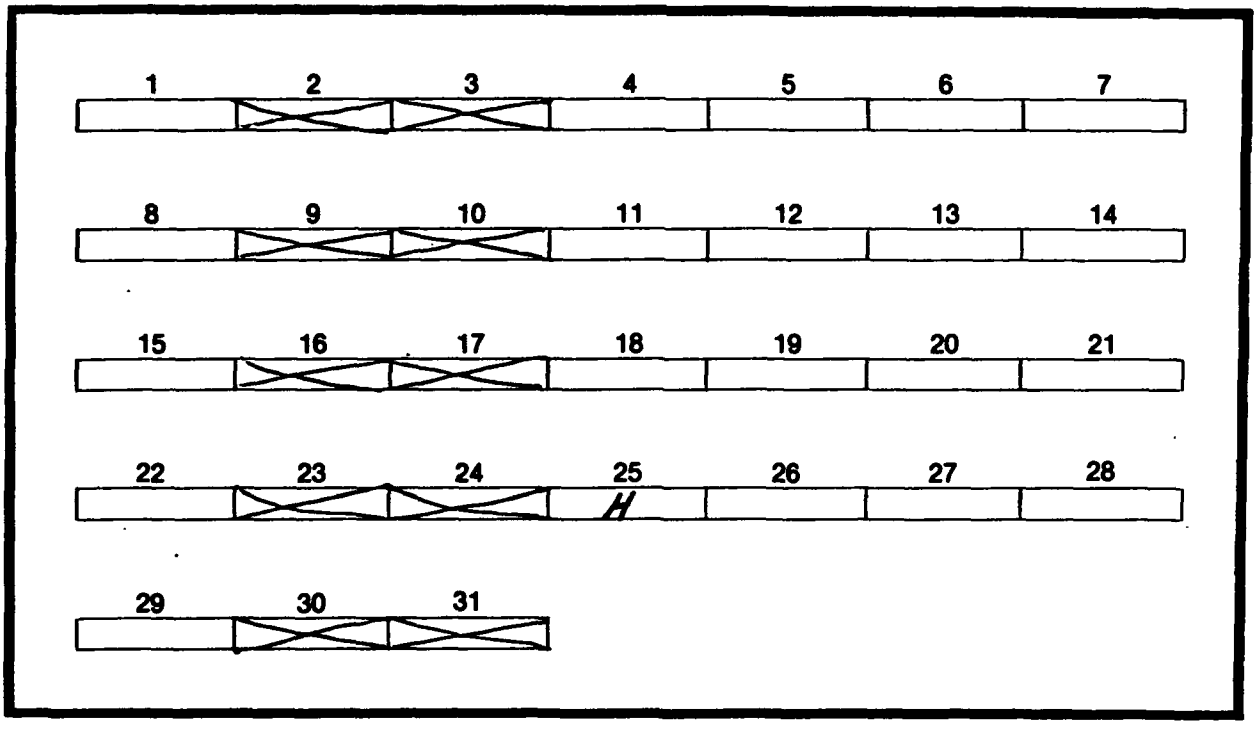
MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Phillip B. Robison

TITLE Assistant Director

MONTH May, 19 81



I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Phillip B Robison
EMPLOYEE SIGNATURE

H. R. Stall
SUPERVISOR SIGNATURE

A - ANNUAL LEAVE	M - MILITARY LEAVE
S - SICK LEAVE	LW - LEAVE WITHOUT PAY
F - FUNERAL LEAVE	JC - JURY AND COURT LEAVE
H - HOLIDAY	AW - ABSENT WITHOUT LEAVE

NOTE: PLEASE SUBMIT 2ND COPY TO THE ASSISTANT DIRECTOR AT THE END OF EACH MONTH PROPERLY SIGNED.

MX POLICY BOARD

TIME AND ATTENDANCE REPORT

NAME Phillip B. Robison

TITLE Assistant Director, MX Policy Board

MONTH April, 19 81

1 8 hr	2 8 hr	3 8 hr	4	5	6 8 hr	7 8 hr
8 8 hr	9 8 hr	10 8 hr	11	12	13 8 hr	14 8 hr
15 8 hr	16 8 hr	17 8 hr	18	19	20 8 hr	21 8 hr
22 8 hr	23 8 hr	24 H	25	26	27 8 hr	28 8 hr
29 8 hr	30 8 hr	31				

I CERTIFY THAT THIS REPORT IS TRUE AND CORRECT.

Phillip B Robison

EMPLOYEE SIGNATURE

H. R. Stark

SUPERVISOR SIGNATURE

A - ANNUAL LEAVE	M - MILITARY LEAVE
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NOTE: PLEASE SUBMIT 2ND COPY TO THE ASSISTANT DIRECTOR AT THE END OF EACH MONTH PROPERLY SIGNED.

ATTACHMENT C

REPORTING & PAYMENT SCHEDULE

EXHIBIT C

REPORTING & PAYMENT SCHEDULE

FCRC No. 6(MS)11-899-046-2

Type of Payment	Due Date
Execution Payment (First Payment) Amount: $225,000.00	Due upon final execution of Grant.
Second Payment Amount: $225,000.00*	Due upon the receipt and acceptance of the First Progress and Financial Report which is due April 1, 1981.
Third Payment Amount: $225,000.00	Due upon the receipt and acceptance of the Second Progress and Financial Report which is due July 1, 1981.
Fourth Payment Amount: $90,000.00	Due upon the receipt and acceptance of the Third Progress and Financial Report which is due October 1, 1981.
Fifth Payment Amount: $90,000.00	Due upon the receipt and acceptance of the Fourth Progress and Financial Report which is due January 1, 1982.
Draft Final Report Amount: -0-	Due March 1, 198[illegible]
Final Payment Amount: $ 45,000.00	Due upon the receipt and acceptance of the finished Final Narrative and Financial Report which is due April 1, 1982.

* This and all subsequent payments shall be conditioned upon the satisfactory completion of the tasks and responsibilities set forth herein.

ADDITIONAL MATERIAL SUBMITTED

EDUCATIONAL ADVISORY TASK FORCE

EDUCATIONAL ADVISORY TASK FORCE

April, 1981

Members	Representing
Superintendent J. Clair Morris Chairman 75 North 300 West Cedar City, Utah 84720 Phone: (801) 586-6516	Iron County School District
Superintendent Fred Openshaw Vice-Chairman P.O. Box 210 Eureka, Utah 84628 Phone: (801) 433-6363	Tintic School District
Dean Harold Hiskey Chairman, SUSC MX Committee 351 West Center Cedar City, Utah 84720 Phone: (801) 586-7700	Southern Utah State College
Representative (to be appointed) Dixie College St. George, Utah 84770 Phone: (801) 673-4811	Dixie College
Superintendent Lynn Haslem 290 North Main Beaver, Utah 84713 Phone: (801) 438-2291	Beaver County School District
Superintendent Jack Burr 189 West Tabernacle St. George, Utah 84770 Phone: (801) 673-3553	Washington County School District
Superintendent Kenneth Topham 140 West Main P.O. Box 666 Delta, Utah 84624	Millard County School District
Superintendent Clark Newell 305 East 100 North Nephi, Utah 84648 Phone: (801) 623-1940	Juab County School District
Superintendent Clarke N. Johnsen 66 West Vine Street Tooele, Utah	Tooele County School District

SEMI-MONTHLY BULLETINS

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

SEMI-MONTHLY BULLETIN
NUMBER 4-81

JUNE 18, 1981

1. The MX Policy Board has recently initiated several major studies to assess and promote mitigation of potential MX missile system deployment impacts:

a. The first of the Board's studies, working with the firm of John M. Sanger Associates, will assess the analytical capabilities and adequacy of data possessed by local governments in the MX impact zone.

(1) This study will identify the strengths and weaknesses in planning and in the analytical efforts to date relevant to preparation of a thoroughly documented fiscal impact analysis to be completed by early 1982.

(2) The study will outline a work program for the future, encompassing the tasks required to produce a fiscal impact analysis.

b. A second study, being done with APA Associates and the Five County Association of Governments, will update local government master plans, ordinances, and controls to reflect potential MX related growth.

(1) The study will assess the capabilities of individual communities to implement comprehensive planning related to MX growth and impacts.

(2) A complete review of master plans and land use ordinances will be made and specific recommendations pertaining to needs and potential problems will be identified. Issues such as conflicts in zoning policies between communities and counties, the effectiveness of land use regulations, duplication of public facilities, cost/benefits of growth management cooperation, etc., will be addressed.

c. A third study being conducted by the Board, in conjunction with John Short & Associates, will examine alternatives for the mitigation of the erosion of local tax bases by the deployment of a tax exempt federal weapons system.

(1) The study will inventory local revenue structures, taxing entities, and existing impact reports.

(2) Existing constraints to modifying/expanding/pooling/local revenues will be examined.

(3) Consequences to local tax structures due to MX deployment will be identified and revenue gaps will be defined and prioritized.

(4) Extensive effort will then concentrate on analyzing "gap financing" alternatives and

d. A fourth study, with the assistance of Peat, Marwick, Mitchell & Company, will center on the fiscal management of mitigation funds.

(1) This assessment will focus on alternative means of funding impact assistance such as funding being distributed through various federal departments or agencies or being made available to local governments through a block grant.

(2) The study will produce a recommendation for a multi-project fiscal management and accounting system and cost data required by such a system.

2. Board Chairman Chad Johnson and Ralph Starr met in Washington, D.C. last week with the congressional delegations from Utah and Nevada, the Office of Economic Adjustment, the Air Force, and others regarding the proposed block grant legislation for deployment impact funding. The meetings were evidently successful as the Senate Armed Services Committee reported the legislative draft out of committee verbatim. Efforts will now be concentrated in the House of Representatives to complete the process.

3. The 15 member panel selected by Defense Secretary, Caspar W. Weinberger, to study MX weapons system deployment modes will most likely make their recommendation to Secretary Weinberger and President Reagan during the first week of July.

4. A number of consultants associated with firms under contract with the MX Policy Board are beginning to collect information in the deployment area. Their contacts with local jurisdictions will be coordinated through the Policy Board Office and all consultants will be identified prior to the release of information. Organizations and firms involved are as follows:

a. Five County Association of Governments

b. Six County Commissioners Organization

c. Paul Nelson Associates

d. APA Associates

e. John Short & Associates

f. Peat, Marwick, Mitchell & Company

g. John M. Sanger Associates, Inc.

If you have questions, please contact this office.

5. Chairman Johnson and Starr will attend a Base Comprehensive Planning Coordination Meeting at Norton AFB, CA on June 24th to discuss matters relating to the siting of the Utah MX Operating Base. The primary purpose of the meeting will be to discuss siting alternatives within the Milford and Beryl suitability zones. Evaluation factors to be considered are:

a. Exclusionary factors which eliminate areas from consideration for operational, geotechnical or environmental reasons.

b. Avoidance/mitigation factors due to existing conditions which present a siting conflict.

c. Operational, environmental, socioeconomic and other quality of life objectives.

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

SEMI-MONTHLY BULLETIN
NUMBER 3-81

May 15, 1981

1. MX Policy Board Chairman Chad Johnson and Director Ralph Starr were recently in Washington D.C. to meet with the President's Economic Adjustment Committee. The major items of concern addressed were:

a. The Urban Institute's report on local government tax burden thresholds and limits was reviewed. The report indicated that communities under 5,000 population experiencing growth of over 5 percent per year from military activity are saddled with unfair and burdensome taxes to support that growth. Cities ranging in population from 5,000 to 200,000 would have to be examined on a case by case basis.

b. Means of alleviating this unfair tax burden were considered. School districts and special service districts were not analyzed in this report.

c. The completed Utah/Nevada legislative package calling for block grant MX impact funding to local and state governments was distributed to members of the committee and discussed. OMB, OEA, and the Air Force provided input and a revised edition of the proposed legislative act was sent to the Pentagon for federal reaction. Starr is hopeful that Congress will now approve the block grant approach.

d. Johnson and Starr met in Las Vegas with representatives from Nevada state and local governments prior to the Washington D.C. meeting to hammer out revisions and reconciliations in the original block grant legislation to promote the chances of its eventual acceptance. Alternative approaches had been developed by the Office of Economic Adjustment and the Office of Management and Budget.

2. Phil Robison, Assistant Director for the MX Policy Board, met on May 5th with regional high school vocational directors on the SUSC campus to discuss potential impacts on educational institutions if the MX weapon system was deployed in Utah. Studies currently underway are examining issues such as:

a. Existing labor force capabilities

b. MX work force/labor profiles, the level and types of skills that will be required, and the size of the labor force that will be employed in the construction and operation of the MX system.

c. Capabilities and roles of educational institutions-secondary and higher education-in providing vocational training to accommodate demands for labor.

d. Funding sources to help educational institutions meet the responsibilities and requirements that will be placed on them by labor force demands.

3. Colonel Van Dillen, Deputy Assistant for MX Matters, Headquarters USAF, Washington D.C. and Phil Robison representing the MX Policy Board attended the

city streets and county roads school held May 13th on the SUSC campus to address MX impact issues relating to transportation networks.

Alex Mansour from District Five of the Utah Department of Transportation gave a presentation at this meeting outlining new roads and the increased maintenance on existing roads likely to be required by MX deployment. Mansour indicated that construction of and improvements on roads could start as early as 1982 following a decision to deploy the MX system in Utah.

4. Colonel Van Dillen and Major Bob McMains of the U.S. Air Force conducted a news conference for members of the local news media on May 13th in the MX Policy Board Offices. Colonel Van Dillen and Major McMains briefed the press on current MX developments and answered questions regarding local concerns.

5. The next Utah MX Intergovernmental Working Group Meeting will be held on May 28th at 1:00 p.m. in Room 204 of the Old Administration Building on the SUSC campus.

The MX Policy Board will meet at the same location starting at 5:00 p.m. the evening of May 28th.

6. Starr and Robison are continuing to meet with local government officials in Southern Utah counties to brief them on MX Policy Board planning efforts and to assess the status of local zoning ordinances and master plans.

7. On May 15th, the Air Force held public meetings in Milford to discuss MX weapon system siting issues and to receive local input.

a. Designated transportation networks, a proposed area support center siting near Delta, and a general discussion of a Milford Operating Base location were some of the issues addressed.

b. The Air Force met earlier that day with ranchers from the area and personnel from the BLM concerning grazing permits and to receive input regarding ranching operations in the proposed deployment region.

8. Robison and representatives from EDAW, the consulting firm doing operating base comprehensive planning for the Air Force, met with community, education, and religious leaders on May 11th to solicit input relating to local attitudes, desires, and concerns regarding the location of an operating base at Milford. Quality of life issues such as the following were addressed:

a. Transportation

b. Communication

c. Recreation

d. Environmental Sensitivity

e. Aesthetics

f. Social/Psychological Pressures

A similar meeting was held in Milford on the 12th with community leaders from Beaver County.

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

SEMI-MONTHLY BULLETIN
NUMBER 2-81

April 30, 1981

1. The MX Education Task Force met recently on the campus of Southern Utah State College. Bill Trabert, Nevada Department of Education, and Bob Worthington, Utah System of Higher Education, were asked to form a special task force to look into the projected needs for trained manpower, survey the existent capability for meeting these needs and recommend what else needs to be done to put Nevada and Utah into a position to respond appropriately to future demands for vocational/technical training at the high school and post high school levels.

a. Funds for the support of the work of this task force will be sought from each of the State MX Planning Offices.

b. A progress report on the work of this special task force will be forthcoming.

2. MX Policy Board Director Ralph Starr and Phil Robison met on April 24th with Superintendents representing Utah school districts located in MX deployment impacted areas to brief them on MX developments.

a. A technical advisory committee on education comprised of school superintendents from these local Utah school districts was formed. The purpose of this body will be to provide technical expertise and assistance to the MX Policy Board on education issues.

b. J. Clair Morris, Superintendent of the Iron County School District was elected chairman of this committee and Fred Openshaw, Tintic School District Superintendent was installed as vice-chairman.

3. Starr and/or Robison appeared before over twenty (20) county commissions, city councils, planning commissions, and other local jurisdictions during the month of April to present briefings and updates on MX developments and to continue the status survey of local zoning ordinances, controls, and master plans.

a. Zoning ordinances, subdivision ordinances, and master plans are being screened by local governments to determine if updating or further work due to MX related growth is required.

b. Iron County and the municipalities within Iron County have requested funding for a study to coordinate county wide efforts to insure that wide variances do not exist between the plans and zoning and code requirements either between the county and communities or between various communities within the county.

c. The MX Policy Board approved funding for the Iron County/municipalities request, as well as for similar studies, on a concept basis, to be conducted in Beaver, Millard, and Juab counties.

4. Phase II-A, the base operational impact study for an operating base location near Milford should be available in draft or first cut form by mid-May.

a. The comprehensive impact study based on current Air Force MX projections for a small OB in the North Escalante Valley will address issues such as:

1. Population Projections
2. Impact Area Land Use Analysis
3. Ordinances and Codes
4. Housing
5. Jurisdictional Services: General Government, Libraries, Cemeteries, Parks and Recreation, Public Safety, Fire Protection, Solid Waste, Streets and Roads, Airports
6. Sewage Disposal and Water Supply
7. Social Services
8. Education
9. Health
10. Transportation
11. Utilities

b. There will be a meeting on May 20th at 1:00 p.m. in the Milford Library for Beaver and Iron County elected officials for the purpose of reviewing the first draft of this Phase II document.

5. The MX Policy Board in conjunction with the Office of Economic Adjustment (OEA) is tentatively planning a two-day Training Seminar on Planning Management for late May in Southern Utah.

a. Elected officials, staffs, members of planning commissions, etc., within the MX deployment area will have an opportunity to study planning techniques and methodologies at the two-day workshop.

b. Additional information concerning the place and date of the Planning Seminar and persons to be involved in this training program will be announced in the near future.

6. MX related activity in the U.S. Congressional and Executive branches has slowed down somewhat during the past two weeks. Legislative action dealing with the MX system has been held up pending a decision from President Reagan concerning his plan for the system's future.

a. The 15 member panel selected by Defense Secretary, Caspar W. Weinberger, to review the MX basing system will most likely report their findings to the President and Secretary Weinberger in June. A decision from the White House should be forth coming in July.

b. There appears to be growing support on the part of Legislative, Executive, and Federal agency personnel for some form of block grant impact mitigation funding to assist local governments in the impacted areas to accommodate the MX induced growth.

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

BI-MONTHLY BULLETIN
NUMBER 1-81

15 April 1981

1. MX Policy Board Chairman, Chad Johnson and Director, Ralph Starr; State MX Coordinator, Kenneth Olson; and Governor Matheson recently were in Washington D.C. for Congressional testimony.

a. The Utah State and local government representatives testified before the House Armed Services Committee chaired by Representative Brinkley. The testimony concerned the legislative package on block grant funding. First cut or draft information was presented and from all indications the block grant funding approach for mitigating MX deployment impacts was favorably received.

b. The Utah delegation presented testimony jointly with their Nevada state and local government counterparts.

c. It is anticipated that the Chairman and the Director of the Board will be called to Washington in the near future for testimony before the Senate Armed Services Committee and again before the House Subcommittee on Public Lands.

d. Eight different committees and subcommittees of the House and Senate are working directly with the MX Program. Not all will require personal appearances from MX Policy Board representatives, but it is anticipated that the Director will be required to spend a considerable amount of time working with the staffs of the various above mentioned committees.

2. Phil Robison, the Assistant Director for the MX Policy Board, has formulated fiscal management policies and procedures for Board review and approval. Policy manuals to be adopted to govern Board management activities are:

a. Travel Policies and Procedures

b. Personnel Policies and Procedures

c. Purchasing & Accounting Policies and Procedures

d. Personal and Professional Services Procurement Policies and Procedures

3. The Assistant Director initiated a computerized accounting and reporting system for the Board. The system was put on line April 1, 1981 and will be utilized for FY 1981 accounting requirements and fiscal management.

4. Director Starr submitted to the Four Corners Regional Commission the Final Close Out Report for FY 1980 and the Second Quarter FY 1981 Progress Report.

a. The Final FY 1980 Close Out Report will initiate the receipt of the final $12,000.00 in study and planning monies due on the FY 1980 contract.

b. The Second Quarter report will generate the issuance of $225,000.00 for MX Policy Board contracted activities during the next three (3) months.

5. Thirteen standing Citizen Advisory Committees, each chaired by a member of the Board, have been formed in the topical areas: (1) Rapid, Large-Scale Growth (includes housing), (2) Energy & Nonrenewable Resources, (3) Manpower & Employment, (4) Health & Social Services, (5) Land Use & Rights (includes transportation), (6) Geology & Minerals, (7) Recreation, (8) Water Resources, (9) Agriculture, (10) Wildlife Resources, (11) Native American, (12) Public Safety, and (13) Cultural Resources. These committees are made up of representatives from all counties involved in the Policy Board and will serve as technical advisers to the Board.

6. Starr and Robison are in the process of surveying all local jurisdictions in the region to determine if their zoning ordinances and controls and master plans need updating or further work due to MX related growth. When the list is completed, both public and private sub-contractors will be retained to conduct necessary improvements. It is anticipated that 15-20 of these studies in varying degrees of depth will be conducted at the same time. Many jurisdictions have recently updated Master Plans and simply need MX population updates.

7. The local DEIS review process has been concluded, integrated into a formal, written document, and sent to the State for inclusion into a Final Environmental Impact Statement for comprehensive planning and impact mitigation purposes.

QUARTERLY CALENDARS

MONTH JUNE YEAR 1981

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 RALPH - KOA CAMPGROUND 8 p.m. SCIENCE TEACHERS CONFERENCE	2 RALPH-ST. GEORGE P.M. FCAOG STAFF	3 RALPH MAJOR MCMAINS 10:30 a.m.	4 RALPH-SUSC PRESIDENT 1 p.m. DEAN HISKEY MX COMMITTEE 3:00 p.m.	5 RALPH/KANAB KANE COUNTY SCHOOL DISTRICT OFFICIALS P.M.	6
7 RALPH/CHAD LAS VEGAS WASHINGTON, D.C.	8 RALPH/CHAD WASH. D.C.	9 RALPH/CHAD WASH. D.C.	10 RALPH/CHAD WASH. D.C. LAS VEGAS	11 RALPH/CHAD LAS VEGAS BLOCK GRANT	12 RALPH MAJOR LARRY GREER 10:30 a.m.	13
14	15 RALPH/PHIL JOHN SANGER ST. GEORGE-FCAOG RICHFIELD-P.M. LARRY HOOVER SIX COUNTY COMM. ORGANIZATION	16 RALPH JOHN SANGER 11:30 a.m. PAUL NELSON ASSOCIATES 1:00 p.m. KEN OLSON & STAFF STEPHEN PACE	17 RALPH-A.M. RETURN CEDAR 2:25 p.m. DAVID SHEERS LONDON TELEGRAPH CO.	18	19	20
21	22	23 RALPH/CHAD SALT LAKE CITY 12:00 NOON PAUL NELSON ASSOCIATES P.M. ONTARIO CALIFORNIA	24 RALPH/CHAD NORTON AFB, CA BCP MEETING 10:00 a.m. RETURN CEDAR VIA SALT LAKE	25 RALPH/PHIL RAY OLSON/BARRY MUNDT 8:30 a.m. CHAD - RAY OLSON BARRY MUNDT 1:30	26 RALPH DEAN HISKEY SUSC MX COMM. 10:30 a.m.	27
28	29	30				

MONTH MAY YEAR 1981

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 RALPH St. George A.M. John Williams FCAOG	2
3	4 PHIL Minersville Town Board 8:00 p.m. RALPH/CHAD Las Vegas	5 PHIL - SUSC Van Bushnell 1:00 p.m. RALPH/CHAD Las Vegas Block Grant Mtg. 10:00 a.m.	6 PHIL-Enoch Town Board Elem. 8:30 p.m.	7 PHIL-Beaver Co. Comm. 11 a.m. RALPH/PHIL 1 a.m. FCAOG Staff RALPH/PHIL 2:30 p.m. Joe Melling/ Gary Jones	8	9 PHIL Paragonah Town Board 8:00 p.m.
10 RALPH/CHAD Las Vegas	11 RALPH/CHAD Washington D.C. PHIL - EDAW Deanna Roadside SUSC Library Seminar 1 p.m.	12 RALPH/CHAD Washington D.C. PHIL-Beaver Audit - All Day Milford - EDAW Library 10 a.m.	13 PHIL/RALPH League of Cities & Towns SUSC 4:00 p.m. Press Conference Major McMains 2:30 p.m.	14 RALPH - EDAW Eric Zigas a.m.	15 RALPH/PHIL Milford Siting Mtg. 1-5 p.m. Ranchers Mtg. 9-Noon High School Auditorium	16 RALPH Las Vegas
17 RALPH San Francisco	18 PHIL/CHAD Washington D.C. RALPH San Francisco BCP Mtg. 10 a.m.	19 PHIL/CHAD Washington D.C. 803 Study Mtg.	20 PHIL/CHAD Washington D.C. RALPH - Milford Phase II-A Mtg. Library 1 p.m.	21 RALPH Richfield A.M. Larry Hoover Ken Olson P.M.	22 RALPH Salt Lake Siting Meeting A.M. Delta - Millard Co. Commission 2:00 p.m.	23
24	25 HOLIDAY	26 RALPH/PHIL Albuquerque Keith Dotson P.M.	27 RALPH/PHIL Return Cedar from Vegas	28 WORKING GROUP MEETING SUSC OA 204 1:00 p.m. POLICY BOARD MEETING SUSC OA 204 5:00 p.m.	29	30

MONTH APRIL YEAR 1981

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 PHIL-BEAVER P.M. RALPH - 4:00 EDAW MEETING	2 RALPH/CHAD ST. GEORGE 9:30 a.m. OPINION PLEASE RALPH/CHAD LAS VEGAS	3 RALPH/CHAD WASHINGTON, D.C. PHIL-SUSC EDUCATION MTG. 9:00 - 4:00 p.m.	4 RALPH/CHAD WASHINGTON, D.C.
5 RALPH/CHAD RETURN WASH. D.C.	6	7 (6:30 p.m.	6:30 a.m. 8 RALPH/CEDAR CITY COUNCIL RALPH-IRON CO. COMMISSION MTG. 11:00 a.m. FCAOG - 1:30 p.m PHIL-ENTERPRISE	9 RALPH - SALT LAKE CITY UDOT MEETING	10	11
12	13 RALPH/KEN OLSON - UDOT MEETING CEDAR 2:30 p.m.	14 RALPH-CEDAR CITY GROUP NOON BLM - 2:00 p.m. CEDAR PLANNING COMM. 7:30 p.m. PHIL-EUREKA CITY COUNCIL 7:00 p.m.	CITY COUNCIL 15 PHIL-FILLMORE CITY COUNCIL 7:30 p.m. RALPH-PAROWAN CITY COUNCIL 7:00 p.m.	16 BI-STATE DOT STAFF MTG. ELY, NV 1:30 HIGHWAY REGION OFFICE - ALEX MANSOUR	17 RALPH-ST. GEORGE FCAOG DIXIE COLLEGE MEETINGS	18
19	20 PHIL-MILFORD CITY COUNCIL 7:20 p.m.	21 PHIL-BEAVER CITY COUNCIL 7:30 p.m. CHAD/RALPH SALT LAKE CITY	22 PHIL-MILLARD CO. COMMISSION 3:00 p.m. FILLMORE CHAD/RALPH WORKING GROUP MTG. NEPHI CITY COUNCIL	23 POLICY BOARD MEETING-BEAVER 5:00 p.m. CHAD/RALPH RETURN SLC A.M.	24 PHIL/RALPH ST. GEORGE SEDC MEETING 1:00 p.m. SCHOOL DISTRICT OFFICE	25
26	27 PHIL-DELTA CITY COUNCIL 7:00 p.m.	28 RALPH BRIAN HEAD TOWN COUNCIL MTG. FERDINANDS 7 p.m. ELDON/BOB RAUNER OEA - 1:30 p.m.	29 (5:00 p.m.) RALPH/PHIL JOE MELLING CEDAR CITY MANAGER 2 p.m.	30 RALPH- 4 p.m. ST. GEORGE DIXIE COLLEGE PRESIDENT MTG.		

COMMENTS BASE COMPREHENSIVE PLANNING

Please notify Captain Snowbarger at 382-6081

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

June 9, 1981

Wayne Snowbarger
Captain, USAF
AFRCE-MX/DEVC
Norton Air Force Base, CA 92409

Dear Captain Snowbarger:

We appreciate the opportunity to review Deliverables 10, 13, 15, 16, and 21. Due to the compressed timetable, a thorough analysis was not possible. Attached you will find a letter from UDOT District Office with further deficiencies and recommendations on the Transportation Plan, Deliverable 10.

General Comments on Deliverable 21: Comprehensive Design Guidance

EDAW's rationale and assumptions relating to design guidance for the MX operating base convey sound and well thought-out concepts. The design guide will relate directly to the selected site. It cannot be completed prior to site selection due to the differing characteristics of each site and the need to be responsive to local conditions.

Identification of functional systems at the MX operating base will be of great interest to elected officials, planners, and community leaders in areas near the base. Knowing resources and functional systems contained within the operating base will enable locally impacted communities to more readily develop specific mitigation plans.

One planning goal EDAW identified for the operating base is maximum emergency efficiency. Geothermal energy resources could be recommended to them as energy support to the MX operating base, especially since EDAW appears inovative in building design plans and alternate energy sources.

Lastly, the usage possibilities or prioritization for local merchandising or use of local landscapers, engineers, architects, laborers, etc., should be addressed in further interim reports.

General Comments on Deliverable 13: Energy Plan

Deliverable 13 discusses possible energy sources and energy conservation measures for the Milford Main Operating Base. EDAW and the Air Force are recommending stringent construction and siting standards which will minimize the need for heating and cooling.

Solar, geothermal, and wind energy are being considered as possible alternate, renewable energy sources. These sources would lessen the demand for purchased electrical power. If large amounts of purchased power are required, then the

surrounding local communities power rates will inevitably increase. Therefore, we recommend the use of energy sources which will reduce the purchase of electrical power.

Specific Comments on Deliverable 13: Energy Plan

Chapter	Page	Para.	Comments
13.2	2	2	Work area and community center buildings will be served by means of one or more coal fired central plants. We highly recommend that required coal be obtained from local coal fields.

General Comments on Deliverable 15: Utility Systems

As with other deliverables, it is assumed that a good majority of the employees and dependents will be living on or in the direct vicinity of the base. It is Four County Policy Board policy to have employees and dependents not living on the base move to existing communities. Therefore, in the case of water supply, the total operating base water needs are considered high. This excess water, however, should be allocated to the existing surrounding local communities that will receive population impacts from MX.

The operating base will use reclaimed water wherever possible. We support this concept so that limited water resources can be used to support local communities and existing agriculture. The transfer of usage for water in the Escalante Valley would be required because no new water is to be allocated for community development. These impacts were not covered.

The information seems to be accurate, although the national average has been used and this area exceeds that average for water.

This deliverable only rarely discusses what effects these proposed plans will have on local communities. More information is needed concerning this important aspect of MX for all of the different utility systems.

Specific Comments on Deliverable 15: Utility Systems

Chapter	Page	Para.	Comments
15.3	20	2	With the present siting of the operating base near the Iron County, Beaver County line, Milford would be over 20 miles away instead of 10 as stated. Also population figures are stated for 1977. 1980 census data lists the population of Milford, Minersville, and Beaver as 1293, 552, and 1792 respectively.
15.3	20	3	This paragraph states that Milford must improve its water supply system...if future growth is to be accommodated within the existing water rights. Milford has been approved for funding for a new well and

Chapter	Page	Para.	Comments
			pump, a new chlorinating system, and a 1,900,000 gallon storage tank.
15.4	34	2	This paragraph again shows reference to distance from Milford to the OB and should be adjusted accordingly. We strongly favor all water conservation measures that are recommended for the base.
15.4.2.1.9	43		This mentions population figures that were made available as of March 4, 1981. We do not necessarily agree with the percentages of on- and off-base employees and dependents.
15.7.3	106	5	The same reference to distance is again shown. It should again be adjusted accordingly.
15.7.8	122		It appears that virtually all the information that will be useful to us for evaluating the solid waste section will be provided in the next submittal, therefore, we are simply recommending topics that should be carefully looked into. Of most importance is the possibility of having the sanitary land fill be available for joint military and community use. Specific questions that need to be answered: (1) What will the service area be?; (2) What are the capital, operating, and maintenance costs?; (3) What are the per capita costs?; (4) What standards are being used for amounts of solid waste generation?; (5) What will the costs be to local taxpayers?; (6) How do these costs compare to having separate facilities for the military and the communities?
15.10.3.1	146	1	There is an estimate of the maximum electrical requirements if all energy is supplied by electricity. This includes heating and air conditioning, however, the data is for Coyote Springs which has substantially different weather conditions and therefore different heating and air conditioning requirements.
15.10.3.2	147	1	It states that "It is anticipated that an ancilliary civilian community will develop within or adjacent to the MX base. As stated before, this is entirely contrary to local policy.

General Comments on Deliverable 16: Communications Systems

EDAW's report goes into great detail reviewing transmission technology and distribution systems for telecommunications. The outlook presented is quite impressive.

Technological capabilities for handling masses of information at affordable costs exist. However, the possibility of such systems impacting the sparsely populated areas of Southwestern Utah are questionable-if population masses are needed to off-set costs. If advanced communication systems are introduced to the area for military purposes, it would seem potential may exist for local communities and residents to tap communication resources, thus eliminating existent telephone communication problems.

General Comments on Deliverable 10: Transportation Plan

This report predominately discusses on-base transportation systems required for three development scenarios. Basically, it recommends a balance on-base transportation system consisting of highway, transit, pedestrian, and bicycle systems.

It is recommended that the regional highway system and associated MX impacts be studied in more detail including off-base housing in established communities and airport impacts from civilian usage. Attached please refer to UDOT District Office letter with further deficiencies and recommendations.

Specific Comments on Deliverable 10: Transportation Plan

Chapter	Page	Para.	Comments
10.3.1	22	3	To help ensure an adequate, functional highway system, EDAW has recommended as one of its highway planning policies that all regional highway facilities are up-graded to established highway design standards and have sufficient highway capacity to meet projected travel demand. While we agree with this policy, it must be noted that federal funding will be required for most of the highway improvements.
10.3.4.1	30	3/4	This report concentrates on the assumption that all employees will live either on the base or in the vicinity zone with no one commuting from nearby communities for work purposes. This is in direct conflict with Four County Policy Board policy.
10.3.5.2	36	1	It is stated that from Cedar City, Salt Lake City is approximately 200 miles to the north, whereas, it is actually 250 miles.

Chapter	Page	Para.	Comments
10.4.2	39	4/5	The section pertaining to air transportation identifies joint civilian and military use of the airfield as a feasible option. With the relatively close proximity of Cedar City and St. George, both of which have regularly scheduled commercial flights, we feel that the base airfield will not be available for public use.

Sincerely,

H. R. Starr

H.R. Starr
Director

HRS:dl
Attachment - UDOT Letter

(Attachment to Captain Snowbarger Letter)

TRANSPORTATION COMMISSION

R. LAVAUN COX
CHAIRMAN
WAYNE S. WINTERS
VICE CHAIRMAN
CLEM H. CHURCH
SAMUEL J. TAYLOR
CHARLES E. WARD

RONALD A. FERNLEY
SECRETARY

UTAH DEPARTMENT OF TRANSPORTATION

880 North Main
Cedar City, Utah 84720

June 8, 1981

Director
William D. Hurley, P.E.

Assistant Director
C.V. Anderson, P.E.

District Director
Alex E. Mansour, P.E.

MX Missile Policy Board
444 South Main, Suite A-1
Cedar City, Utah 84720

Attention: Ralph Starr, Director

Gentlemen:

On Thursday, June 4, 1981, we were furnished one copy of Deliverable 10, Interim Report 1, Transportation Plan, Milford MX Base Comprehensive Plan. We were asked to review and comment on the document by Monday, June 8, 1981.

Time allowed only a cursory review. Two weeks of time are needed for a thorough study.

Our review has been most disappointing. The document is erroneous and inadequate. It appears to have been prepared by parties unacquainted with the Milford area. No contact was made with the UDOT District Office in Cedar City.

Typical errors pertaining to the existing public highway system appear on pages 35, 36, 37, 38, and 39, together with Figures 10.3.5.2-1, 10.3.5.2-2, 10.3.5.3-1, 10.3.5.3-2, 10.3.5.4-1, 10.3.5.4-2, 10.3.5.4-3, 10.3.5.4-4, 10.3.5.4-5, and 10.3.5.4-6. The route identified as State Route 19 has not been on the State Highway System for approximately twelve years, and it is not a "secondary, all weather, hard surface state route." The document appears to suggest that this worn out, poorly maintained, and seldom used road is capable of accommodating 770 vehicles per hour per lane in its present condition. On the other hand, State Route 130 between Cedar City and Minersville is never identified as a State Route. Also, I-15 is treated as a principle connecting route for MX activities; yet, its use requires horrendous circuity of travel.

The "Highway and Street Planning Policies" on page 22 are disturbing; for example, the document proposes to "maintain a level of service 'D' for automobile travel during peak hours on all arterials." This policy statement is unacceptable to UDOT in its present form. We may accept it if the design year is twenty years hence or thereabout but not upon commencement of MX operations.

UDOT has exerted considerable effort in preparing an assessment of public

(Attachment to Captain Snowbarger Letter)

roads and a plan for accommodation of the MX Missile System in harmony with the public road system. This information has already been furnished to the Air Force. Deliverable 10 is grossly inadequate, erroneous, and generally inferior to the UDOT material.

We recommend that Deliverable 10 be returned to its authors for appropriate revision and that the revisions be based upon reliable information that may be obtained at the UDOT District Five Office in Cedar City.

Yours very truly,

Alex E. Mansour,
District Director

cc: H. B. Leatham
Ken Olsen

(801) 586-5172

MISSILE POLICY BOARD

444 South Main, Suite A-1 ● Cedar City, Utah 84720

MEMO

FROM: H.R. Starr, Director HRS

TO: Captain W.H. Snowbarger

DATE: May 8, 1981

RE: EDAW Deliverables

I wish to preface my remarks with the general statement that I regard the EDAW approach to BCP as it relates to cooperation with the Utah Locals as positive. I'm impressed with their (EDAW) willingness to respond in a flexible manner to our needs.

Some generic comments on the basic EDAW approach to data collection, management, and involvement with the Policy Board Office are as follows:

1. I feel that there is too much reliance on questionable secondary data such as the DEIS and more specifically the HDR input. I realize that its difficult and not expeditious to reinvent the wheel, but I also feel that any analysis that utilizes DEIS numbers for planning purposes is suspect.

2. I am concerned that the methodology and demographics employed by EDAW either be consistent with UPED model being utilized by Nevada, Utah, OEA, and others involved in complimentary studies or the differences in methodology be expressed in detail for possible comparative purposes.

3. It is important that EDAW continue to coordinate with the Local Policy Board to avoid overloading the small rural staffs in the deployment area. In the past, they have been besieged by numerous contractors asking for MX related data.

Specific Comments on Deliverables

Deliverable 5:

I have no real problem with EDAW's Data Management Plan. On page 5, they refer to the "M-X Information Center". I would point out that there is currently an "M-X Information Center" in Utah that is anti-MX. On page 21 of the appendix, the MX Policy Board is not listed under the Utah contact list for information. I remind you again that both offices need to be included in any information exchange.

Deliverable 8: Milford-Land Use Plan.

General Comments: The maps are difficult to read and reference to existing landmarks (cities, roads, etc.). The map between pages 5 and 6 doesn't show Route 19, the nearest existing road to the proposed base. Existing land use and ownership would be helpful in location of proposed facilities.

There should be further discussion of assumptions regarding the location of facilities, housing, and services on base as contrasted to locating them in existing communities. The Policy Board has gone on record supporting the location of facilities, housing, and services in the existing communities as much as possible. Our planning consultants are basing their work on this assumption.

Section 3 (appendices) contains the area of most concern for the Policy Board. Section 8.3.1 and 8.3.2 contain many references to the relationship of BCP to local planning efforts and the existing communities. We hope as the project unfolds, these statements are more than lip service.

Section 8.3.2.1, page 17, does not detail EDAW's assumptions enough to determine if they are consistent with those being utilized by Nevada, Utah, and OEA consultants. The section in fact, is mostly definitions rather than assumptions. It is difficult for us to react to the EDAW numbers without examining the assumptions and methodologies that were used to produce them.

For example, it would be helpful to see their multipliers for primary, secondary, and tertiary populations. Another important assumption not expressed is the off base/on base mix of military housing. Norton officials have given us the figure of 47% off base as worst case impact on existing communities. What did EDAW use? Our consultant used 1/3 of population providing residentiary services (food, medical, and other support services); EDAW used 6%. This would obviously put more impact into the existing communities.

Some further examples of differences in assumptions are as follows:

1. EDAW projects military households as 2.67; UPED projects 3.18 to 3.34 depending on the year. We feel that EDAW is low on both military and civilian households.

2. EDAW's secondary and civilian populations for the MOB are about the same as our figures for the AOB. Logic would suggest that the larger base would have a larger secondary and civilian population. How did EDAW come up with their projections? What methodology did they use? Which of us are utilizing the more accurate assumptions?

3. EDAW shows a maximum MOB impact of 43,000. The UPED model shows 20,322. Is the difference construction populations? It appears that our models are similar, but have been programmed with different numbers. A possible reason for the difference could be our lack of accepted construction figures.

The need to examine standards is also important. For example, in Utah single family units of 9-14 per acre (page 20) are considered very high. Density of that level will result in lots 4,840 to 3,111 square feet. These would be small, even for mobile homes. Will regional and local standards be considered in the EDAW study?

We feel that deliverable number eight (8) and its section 3 in particular are not detailed enough and contain many possible concerns for local planners and decision makers. We feel that where possible Air Force contractors should utilize the same population numbers, multipliers, and standards as state, local, and OEA consultants. Finally, I felt the discussion on page 23 was weak on the MX Policy Board and it's role in the deployment area.

Deliverable 24: Work Plan.

I have no major suggestions on the Work Plan. Section 4 (Planning Coordination and Cooperation) was the area of most concern. Here again, we urge the EDAW planners to coordinate their efforts with the Policy Board as much as possible. Page 123 inaccurately states that state and local planning consultants are funded through OEA. OEA is funding its own consultants in the deployment area. State and local efforts are being funded through the budgets of the State MX Office and the MX Policy Board. In some cases, the deliverables are discribed so briefly that it is difficult to determine possible concerns of locals (sections 4-26).

Again, may I express my overall positive attitude toward the EDAW approach. I feel that the concerns I have raised can be worked out through dialogue with the EDAW, the Air Force, and the Policy Board. We appreciate the opportunity to comment on the EDAW materials. Your cooperation is appreciated.

HRS:dl
cc: Chad Johnson, Chairman

EDAW QUALITY OF LIFE MEETING

MILFORD, UTAH LIBRARY

Tuesday, May 12, 1981

10:00 a.m.

Persons Contacted

John Maxey
Milford Business Association

Lee Pettey
Principal, Milford High School

Lee Scheideman
Seventh Day Adventist Church

Keith Long
Methodist Church and Lion's Club Secretary

Red Wilson
Editor, Beaver County News

Mayor Roy Young
Beaver County Mayor, MX Policy Board

Mayor Ruben Dotson
Minersville, Utah

Lynn Cartwright
Sheriff, Beaver County

Sherrell Nichols
LDS Bishop

Betty Baxter
ESA Soriority

EDAW QUALITY OF LIFE MEETING

CEDAR CITY, UTAH

SUSC Library Seminar Room

Monday, May 11, 1981

1:00 p.m.

Persons Contacted

Superintendent J. Clair Morris
Iron County School District

Garth Jones
Cedar City Chamber of Commerce Office

Sheriff Ira Schoppmann
Iron County Sheriff's Office

Brent Hunter
Farmer/Rancher

Jeff Marchant
LDS Stake President

Conrad V. Hatch
Southern Utah State College/LDS Stake President

Charlie Blackburn
Western Rock Company

Father Frank J. Kunz
Catholic Church

Joe Melling
Manager, Cedar City Corporation

Lee Fife
Cedar City Council Member

Richard Garrett/Craig Barrick
District Five Social Services Office

COMMUNITY IMPACT ASSISTANCE BLOCK GRANT LEGISLATION

June 25, 1981 (Based on Comments from The Department of Treasury and Department of Education)

Working draft candidate alternative approach to be included in the Section 803 Report.

SPECIAL IMPACT ASSISTANCE

Sec. _____ (a) The Secretary of Defense, or his designee, (hereafter referred to as the Secretary) is authorized to provide special impact assistance, as outlined in subsection (b) below, to States, territories, Indian tribes, local governments, r duly recognized associations or authorities of local or State governments from monies appropriated to the Department of Defense for that purpose. Funds appropriated and commitments authorized specifically for Special Impact Assistance shall be used in conjunction with on-going domestic agency programs, wherever possible, to avoid an unfair and excessive financial burden of providing increased public facilities or services in the immediate vicinity of, and directly attributable to, the major construction or expansion of military facilities. Pursuant to subsection (d), such funds and commitments shall be made available only in those exceptional circumstances where Federal agency programs are inadequate either in amount or purpose, as determined by the Director of the Office of Management and Budget, and normal State and local resources are inadequate to support national security requirements.

(b) Special impact assistance authorized by this section may include (1) providing direct grant assistance, (2) helping communities or States meet their share of costs under existing Federal agency programs, (3) guaranteeing State or municipal indebtedness and (4) subsidizing interest payments on guaranteed obligations held by the United States, commercial, or State bonding institutions. With respect to any indebtedness issued after the enactment of this section and guaranteed under this section, the interest paid on such obligation and received by the purchaser

thereof (or the purchaser's successor in interest) shall be included in gross income for the purposes of Chapter 1 of the Internal Revenue Code of 1954, as amended.

(c) Special impact assistance authorized by this section shall be made available and administered in accordance with (1) regulations promulgated by the Secretary, (2) the annual community impact facilities and services program (hereinafter referred to as the Program) which shall be specific by project or activity and approved by the Secretary, and (3) the multi-year community impact facilities and services plan. Such Program and the multi-year plan shall be locally prepared and submitted by a duly constituted intergovernmental Defense impact planning and mitigation board (hereinafter referred to as the Board), composed of local, State and advisory Federal members. The chairman, as authorized by the Board, shall submit implementing procedures and regulations for planning and programming, including regional or State performance and cost standards that are compatible with Department of Defense regulations. The Program and the implementing procedures and regulations shall be submitted to the Secretary who may approve the submissions in whole or in part or may disapprove the submissions and require their resubmission. Such approval shall be based upon a determination that the Program: (1) is consistent with the multi-year plan, (2) meets the public facility and services needs of the military departments responsible for the Defense construction or expansion, (3) demonstrates that the public facilities and services are needed as a result of anticipated Defense-related growth, (4) avoids an unfair and excessive financial burden to State and local governments, and (5) is in compliance with the applicable regulations set forth by the Secretary. The Secretary shall submit his approved Program in support of the President's annual budget request to the Congress.

(d) The Secretary, in consultation with the heads of the other appropriate Federal agencies and elected officials of impacted jurisdictions, shall within 120 days of

the enactment of this Act publish (1) standards for initiating special impact assistance, and (2) regulations governing the administration of special impact assistance, such regulations among other things to include the planning process standards and requirements for multi-year comprehensive plans and programs.

(e) The Secretary shall (1) keep the appropriate Committees of Congress informed of major changes to the Program made pursuant to regulations promulgated by the Secretary, (2) submit an annual schedule of program and financial audits and reports, and (3) shall submit annual reports to the appropriate Committees of Congress indicating the total amounts transferred to and the amounts obligated and expended by each recipient of special impact assistance provided under the authority of this section.

(f) Grant assistance to eligible recipients shall be made available through a duly designated fiscal agent upon certification that such funds (1) will be used in accordance with the approved Program, (2) are required for obligation within the following twelve months, and (3) will be used in accordance with applicable State, local, and Federal regulations.

(g) Subject to regulations promulgated by the Secretary, the Board may approve reprogramming and cost variations for projects in the approved Program and establish and administer a minor project and activities account.

(h) The Secretary shall determine when there is no longer an unfair and excessive financial burden to the impact jurisdiction by Department of Defense activities. The Secretary of Defense shall also determine when the major construction or

expansion of military facilities has been physically completed. No new Special Impact Assistance may be provided after two years thereafter unless the Secretary of Defense, in consultation with the Director of the Office of Management and Budget, determines on a biennial basis that an unfair and excessive financial burden still exists.

(i) For the purpose of this section, (1) "unfair and excessive financial burden" means the net fiscal deficit imposed on an affected jurisdiction by the difference between the incremental capital or operating costs required to support national security requirements and the increases in public tax revenue and bonding capacities derived from the regional spending resulting from the Defense expansion or new construction -- based on equitable local and state taxing efforts and the good faith allocation of normal domestic Federal agency and state assistance to the impacted jurisdiction. (2) "fiscal agent" means an officially designated financial administration, accounting and auditing activity for the impacted area in behalf of the Board. (3) "Defense-related growth" means the direct or secondary population, employment or economic activities attracted to or induced into the immediate vicinity of and directly attributable to the major construction or expansion of military facilities; specifically, those activities which would not otherwise exist in the area without the Defense construction or base expansion and (4) "comprehensive plans" mean the appropriate elements of the documentation described in 42 U.S.C. 4201 (9) and elements required to be addressed under the applicable provisions of state statutes and regulations pertaining to planning and the preparation of comprehensive plans.

(j) Section 802 of the Military Construction Authorization Act, 1981 (Public Law No. 96-418; 94 Stat. 1777) is hereby repealed.

AGENDAS AND MINUTES

INTERGOVERNMENTAL WORKING GROUP AND MX POLICY BOARD

UTAH MX INTERGOVERNMENTAL WORKING GROUP

SUSC, Old Administration Building, Room 204

May 28, 1981 - 1:00 p.m.

A G E N D A

1. Welcome and Introduction

2. Minutes

3. Air Force Status Report
   - A. Base Comprehensive Planning (EDAW, Inc.)
   - B. Construction Management Plan - Status

4. Corps of Engineers Status Report
   - A. Life Support Study

5. Office of Economic Adjustment - Status Report
   - A. Deployment Area Housing Study
   - B. Other Items

6. MX Policy Board - Staff Report
   - A. Fiscal Year 1982 Budget Requests
   - B. Phase II Study
   - C. Planning Studies
   - D. Contracted Studies

7. MX Coordination Office - Staff Report
   - A. Fiscal Year 1982 Budget Request
   - B. Status of Impact Aid Legislation - 803 Study
   - C. Fiscal Management Study - Approval

D. A-95 Clearinghouse Process - Approval

8. Other Business

A. Schedule Next Month's Meeting

B. Sequence of Policy Board and Intergovernmental Meetings

UTAH INTERGOVERNMENTAL WORKING GROUP

April 22, 1981 - 1:00 p.m.

State Capitol Building, Room 303

A G E N D A

1. Welcome

2. Minutes of February's Meeting

3. UDOT Report - Improvements and Construction Requirements

4. Utah Fiscal Impact Study Plan

5. Fiscal Year 1982 Work Program

6. Review of DEIS Comments

7. Air Force Status Report

8. OEA Status Report

9. Schedule Next Meeting

UTAH MX INTERGOVERNMENTAL WORKING GROUP

Wednesday, April 22, 1981

Room 303, State Capitol - 1:00 p.m.

MEMBERS PRESENT:

Kent Briggs, State Planning Coordinator
Courtney Larsen, Governor's Office
Dale Carpenter, Dept. of Community & Economic Development
Chad Johnson, MX Missile Policy Board
Don Baer, U. S. Army Corps of Engineers
Colonel Ken Van Dillen, HQ USAF
Eldon Erickson, OEA
Mark Paxton, MX Missile Policy Board
Jack Sawyers, MX Missile Policy Board

ALSO PRESENT:

Kenneth Olson, Utah MX Coordination Office
Ralph Starr, MX Missile Policy Board
William Hurley, Utah Department of Transportation
Major Bob McMains, Utah MX Liaison Officer
Martin Prisco, USAF Norton Air Force Base
John Roach, Utah MX Coordination Office
Ann Keegan, Utah MX Coordination Office
Larry Hoover, Six County Planning Office
Terry Wirth, Wasatch Front Regional Council
Charles Bestor, MX Information Center
Keith Haimes, MX Concerned Citizens of Central Utah
Howard Leatham, Utah Dept. of Transportation
Homer Chandler, Mountainland Association of Governments
Craig Bott, Governor's Budget Office
Lisa Michele Hunt, Senator Garn's Office
Eric Zigas, EDAW Inc.
Larry Kennings, EDAW, Inc.
Denise Earle, Secretary

Chad Johnson moved to approve the minutes of the February 25, 1981 Intergovernmental Working Group Meeting held in Cedar City. Courtney Larsen seconded the motion which passed unanimously.

Mr. Bill Hurley and Alex Mansour of the Utah Department of Transportation had been asked by the Utah MX Coordination Office and the MX Missile Policy Board to prepare a budget for transportation requirements for FY 82 that would deal with the transportation component of the planning effort for the short run as well as determining what the real requirements for road repair and construction would be using the most plausible scenario for

deployment and, also, preferred alternatives. The District 5 Office in Cedar City took the lead on analyzing these impacts. Mr. Mansour handed out information explaining the tasks undertaken to prepare this analysis, a map and summary of ownership if the land, and costs and projected construction and road repair broken out by Fiscal Year 1982 and 1983. Using the most probably scenario, it was determined that a road would be needed to tie the operating base into Cedar City and a road constructed between the main operating base in Coyote Springs to the secondary base in Milford, Utah. It is estimated that the construction requirements for FY 82 would be 3.4 million dollars for pre-construction work to be expended during that fiscal year. Kent Brigss made a motion authorizing that the transportation package presented to the Intergovernmental Working Group be submitted to the Air Force and Congress for funding. Chad Johnson seconded the motion which passed unanimously. Ralph Starr commended Alex and the Utah Department of Transportation for the work that has been done on this effort.

UTAH FISCAL IMPACT STUDY PLAN

Mr. Olson advised that the Utah MX Coordination Office and the MX Missile Policy Board have been making contact with various institutions and groups to have a reconnaissance developed that would determine what the final impact analysis should contain. Contact has been made with John Sanger and Associates who did the fiscal impact work for Kitsap County. John Sanger has been asked to give us a proposal to do an evaluation that would bring us to the point of soliciting a bid from a contractor to actually do the fiscal impact analysis. The costs of this evaluation will be shared between the Utah MX Coordination Office and the MX Missile Policy Board as well as sharing in the direction of the work. Colonel Van Dillen stated that General McCarthy is concerned that this is just another study to look at fiscal impact which has already been done. Mr. Olson stated that this effort would get us to the point where we could establish the mechanisms and parameters for the fiscal impact study - the contract with John Sanger and Associates would essentially develop a scope of work. Jack Sawyers made a motion to approve this effort, Chad Johnson seconded the motion. The motion passed unanimously. Mr. Olson advised that the State of Nevada has contracted with the Urban Institute for their fiscal impact study.

FISCAL YEAR 1982 WORK PROGRAM

A memorandum was passed out which contained a summary of the state agencies' current funding request for FY 82 planning monies. The Budget Office is presently analyzing these requests to see how they correlate with the various budgets of these organizations. These requests will be finalized and submitted to the Subcommittee hearings for authorization. Mr. Olson stated that these hearings have been delayed until after the Air Force

has made its decision. The summary sheet included all of the state agency requests with the exception of the Utah Department of Transportation funding request.

Mr. Olson advised that the Governor's CETA funds would be used to do a study about the institutions of public and higher learning, labor training and vocational needs if MX is deployed. The cost of this study is about $35,000 which is only Utah's portion.

REVIEW OF DEIS COMMENTS

Mr. Olson stated that the state comments would be released on April 23, 1981 by the Governor. It was decided to submit the three reviews separately with a cover letter from the Governor which would encompass all of the reviews. It was noted that there were very few technical conflicts, if any. Nevada's comments are also similar to the State of Utah's. Colonel Van Dillen stated the the Final EIS will be released sometime during July.

AIR FORCE STATUS REPORT

Colonel Van Dillen reported that the Townes Committee (group of 14 members who are looking at the MX basing mode) is looking to see if all of the reasonable basing alternatives have been considered and to determine the best alternative. The Air Force has been making presentations to this committee at their request as well as recommending modifications to the present basing mode. The Townes Committee asked the Air Force to tell them what could be done to reduce the impacts or restrictions because of SALT II. The Navy has also made presentations about SUM and the Army has made presentation on silos. The Air Force has also been asked about small missiles, launch under attack and Minuteman. Colonel Van Dillen also advised that Laxalt and Garn will be co-chairing the deployment hearings on MX in May and announced that three additional hearings would be held in Reno, Austin and Elko and a public hearing in Provo on April 30th. Colonel Van Dillen introduced Larry Hennings of EDAW, Inc. and stated that EDAW Inc. is the contractor that will be doing the Base Comprehensive Planning Study.

Colonel Van Dillen announced that Major McMains had been made a Lieutenant Colonel and offered the Air Force's congratulations. The Working Group also added their congratulations.

Governor Matheson and Chad Johnson testified before the Subcommittee on Military Installations and Facilities of the House Armed Services Committee about the "block grant" mechanism for impact funding. Mr. Olson also reported that the Office of General Council is reviewing that proposal and that the Office of Economic Adjustment gave a limited and qualified endorsement supporting the block grant approach.

Mr. Olson stated that was requesting that the company of Peat, Marwick, Mitchell do a requirements analysis that would determine the fiscal grant management system that would be necessitated under a block grant program. This company will assess the necessary accounting and fiscal management system to establish proper distribution of the funds.

OEA STATUS REPORT

The boom town study has been sent out to all of the members of the Intergovernmental Working Group. It was primarily prepared for use by the local governments to identify the kinds of problems that they may be facing to help identify possible solutions to those problems. Eldon Erickson also reported that OEA is having Real Estate Research Corporation do a report dealing with housing impacts in Nevada and that portions of that report would be adapted to determine problems in Utah, manpower needs, etc. This study is currently in its third draft. It was requested that the State of Utah get a copy of the third draft to enable us to start adapting it. Mr. Erickson agreed to get a copy sent out immediately.

It was decided to hold the next meeting in the deployment area on May 27, 1981.

COE STUDY

Mr. Baer reported that the Life Support Study is essentially complete. He also reported that the Construction Management Plan is in its final stage now and should be out by the end of May. The Life Support Study will be released at the same time.

Martin Prisco advised that the Corps of Engineers would have two teams out in the deployment area the last week of April to do reconnaissance work for the Tier II effort. He also reported that casual use permits would be issued by BLM.

Mr. Johnson advised that he had received funding requests for $30,000 from the Five County Association of Government, $30,000 for the Six County Commissioner's Organization and $49,000 for Millard County and asked for the Working Group's A-95 review. Mayor Sawyers moved that we table then until the next meeting so that the requests can be reviewed. It was decided that copies would be mailed out and if the MX Missile Policy Board had received a response within a week, it would be assumed that the members are in agreement to approve them.

The meeting was adjourned at 3:15 p.m.

A G E N D A

UTAH STATE FOUR COUNTY MX POLICY BOARD

MAY 28, 1981
SUSC OLD ADMINISTRATION 204
5:00 P.M.

I. MINUTES - APRIL 23, 1981 - REVIEW AND APPROVE

II. BOEING COMPANY PRESENTATION

III. EDAW PRESENTATION

IV. DoD UPDATE
- A. AIR FORCE
- B. OEA
- C. COE

V. WASHINGTON/SAN FRANCISCO/ALBUQUERQUE TRIPS

VI. PROCEDURES & AUDIT REPORT

VII. WORK PROGRAM UPDATE

VIII. CONTRACTS AND FUNDING REQUESTS

IX. CORRESPONDENCE

X. OTHER BUSINESS

M I N U T E S

UTAH STATE MX FOUR COUNTY POLICY BOARD MEETING

SUSC OA 204 - Cedar City, Utah
May 28, 1981 - 5:00 p.m.

MEMBERS PRESENT	REPRESENTING
Chad Johnson, Chairman	Beaver County Commission
Roy L. Young	Beaver County Mayors
Ben H. Robison	Millard County Commission
Max Garbett	Juab County Schools
Claude R. Lomax	Juab County Commission
eon Pexton	Juab County Mayors
James L. Clark	Iron County Commission
Lee Fife	Iron County Mayors

MEMBERS ABSENT	
Karl Truman	Beaver County Schools
Stephen L. Adams	Iron County Schools
Mark Paxton, Vice-Chairman	Millard County Mayors
Leoyd Lovell	Millard County Schools

OTHERS IN ATTENDANCE	
H.R. Starr	Director, MX Policy Board
Phillip B. Robison	Assistant Director, MX Policy Board
John Whitney	Washington County Commission
D.H. Berard	Boeing Company
C.F. Hanley	Boeing Company
Robert Whittier	Boeing Company
Jim Cummings	Boeing Consultant
Major Bob McMains	MX Liaison Office, Utah
Colonel Ken Van Dillen	HQ USAF
Gary D. Vest	HQ USAF
Paul Sage	Office of Economic Adjustment
ldon Erickson	Office of Economic Adjustment
eric Zigas	EDAW
Christina Rockrise	EDAW
Martin Prisco	USAF, Norton Air Force Base
John Roach	Utah MX Coordination Office
Jeannine Holt	U.S. Senate Office - Garn/Hatch
John S. Williams	Director, Five County AOG
Larry Hoover	Six County Natural Resource Planning Office
Carvel Magelby	Six County Commissioners Organization
M.K. Williams	CURIC
Paul Nelson	Paul Nelson Associates
Leland J. Roper	Delta City
N.E. "Red" Wilson	Beaver County News (Milford)
Bruce Lee	Iron County Record
Michael Slizewski	Cedar City Spectrum
Rhead Bowman	Citizen, Cedar City
Barbara Starr	Cedar City Council
Georgia Beth Thompson	Cedar City Planning Commission

OTHERS IN ATTENDANCE	REPRESENTING
Larry Chaston	Southern Utah State College
Dean Harold Hiskey	Southern Utah State College
Celeste Denton	Southern Utah State College
Arlene Braithwaite	Citizen, Cedar City
Katherine Humphrey	Citizen, Beaver
Lillie Perkins	Citizen, Cedar City
Elouise Montague	GEM Enterprises
Ray Brim	MX Dividend
Diane Lamoreaux	Secretary, MX Policy Board

WELCOME AND INTRODUCTIONS

Chairman Johnson called the meeting to order at 5:00 p.m. and welcomed everyone. A special introduction was extended to Cedar City Councilman Lee Fife representing Mayor Sawyers.

MINUTES - REVIEW AND APPROVAL

The minutes of the April 23, 1981 meeting were presented for approval. BEN ROBISON MADE A MOTION, SECONDED BY MAX GARBETT, TO APPROVE THE MINUTES OF THE APRIL 23, 1981 MEETING. MOTION CARRIED.

BOEING COMPANY PRESENTATION

Chairman Johnson introduced Dennis Berard and Bob Whittier of Boeing Company and turned the time over to them for a presentation. Mr. Berard explained that the presentation was based on generic layouts from the Air Force. The aerospace company headquarters are located in Seattle, Washington. Boeing plans to hire as many local people as possible with 1/3 of their operation located at the OB and 2/3 in the communities. Ralph asked for an analysis of how their support facilities will relate to the base. Mr. Berard indicated that they have mostly addressed activities at the main operating base. Ralph asked what analysis has been done to locate factories adjacent to the deployment area and if they will be putting factories in Utah even if the MOB is deployed in Nevada. They indicated that at this point they are looking at the option of putting factories in both states.

EDAW PRESENTATION

Major McMains introduced Christina Rockrise of EDAW. Christina explained that 20 thousand acres would be considered for study rather than 10 thousand acres as originally proposed. She also explained that they are working around a 2 mile corridor of the IPP power lines on all alternatives.

Leon Pexton raised a question about restricted air space. It was explained that the Air Force is required to go through the FAA. The final decisions are made by FAA.

The EDAW presentation covered land use plans for Beryl and Milford and the advantages and disadvantages of all alternatives for these locations. It was indicated that more time has been requested for study of deliverables.

AIR FORCE STATUS REPORT

Colonel Van Dillen reported that the newspapers are reporting MX issues fairly accurately. He explained that the Secretary of Defense put together a committee to cover examination of the following: (1) Have all reasonable basing modes been examined?, and (2) In their professional opinion, what is the best alternative? He indicated that this committee is involved in their last major meeting in Los Angeles and will be meeting tomorrow to decide what are reasonable alternatives. The recommendations from this panel will be turned over to the Secretary of Defense by the 1st of July.

Congress will not appropriate FY 1982 monies until the basing decision is made on MX. The Air Force is under the instruction of the Secretary of Defense to proceed with planning as long as critical to the program. If MPS deployment of MX is determined necessary, construction would begin next spring in Nevada with Coyote Springs as the number 1 base.

Final decisions have not been made. The President will first decide on the basing mode of the system and then where to put the system after basing decision has been made.

OEA STATUS REPORT

Eldon Erickson furnished the Policy Board with two issue papers. One on housing and the other on labor force impacts. These papers will help identify issues that we should be focusing on and will also be useful in identifying other areas that need to be studied. The housing issue paper was done in cooperation with the U.S. Housing and Urban Development Office. Paul Sage reported that another study is being planned dealing with potential cummulative impacts of Energy and MX. They are looking into the possibility of additional studies as requested. He also reported Utah state and locals have been participants in the 803 study. 803 got its name because it was mandated by Congress under Section 803 of P.L. 96-418. The Office of Management and Budget is in charge of this study. OEA is acting as staff to the task force which commenced the study last fall. Representatives from Utah and Nevada and other states were asked to participate in this study. In March, a preliminary draft was provided to the President. On May 19th, the last meeting of the task force was held in Washington, D.C. Ralph indicated that copies of the findings of the 803 study will be sent to Board members.

SAN FRANCISCO/ALBUQUERQUE TRIPS

Ralph reported that he traveled to San Francisco this month to participate in Base Comprehensive Planning meeting which was more of a process meeting to determine how to interface comments coming into EDAW. EDAW has consented to come into the deployment area to get most of their information. Ralph indicated that he has found them to be very cooperative in working with us.

Ralph and Phil also traveled to Albuquerque during the past month to meet with Keith Dotson, FCRC, regarding the Close Out Report for FY 1980 and the First Progress Report for FY 1981. Policy Board reports and contracting procedures were adapted to conform to FCRC suggestions on improving audit trails.

PROCEDURES AND AUDIT REPORT

Phil Robison reported that we have received written notification from Keith Dotson, FCRC, approving our Policies and Procedures Manual. Phil also indicated that he will be making the first quarterly financial report in the July meeting. At this time, Phil explained that the Office of Management and Budget prohibits a line item for Miscellaneous Expenses. He suggested that we move the amount under this line item to Conference Expense.

ROY YOUNG MADE A MOTION TO MOVE THE AMOUNT OF ONE-THOUSAND FIVE HUNDRED DOLLARS ($1,500.00) FROM MISCELLANEOUS EXPENSE TO THE LINE ITEM CONFERENCE EXPENSE. MOTION WAS SECONDED BY JIM CLARK. MOTION CARRIED UNANIMOUSLY. (See attached revised budget)

WORK PROGRAM UPDATE

Ralph reported that a meeting was held to present the Draft Phase II-A study on May 20, 1981 in Milford. Copies of this study have been distributed to officials in Beaver and Iron Counties for review and comment. Comments have been requested to be returned within three weeks. If no comments are received, the document will be assumed to be in good condition. Comments should be submitted to either John Williams or directly to the MX Policy Board Office by June 9, 1981.

Jim Clark raised the question about growth into Parowan and Paragonah. He indicated that he has been receiving comments from these communities and they feel that some growth should be shown into these areas. Ralph explained that we have met with these communities and explained that we are talking about operating base analysis. A separate analysis will be done in construction phase. The effected city councils have been consulted on this issue.

Larry Hoover presented a progress report on the Phase II-B study with the OB in the Delta area. He explained that the Six County Natural Resource Planning Office is under contract for this study and are conducting a similar study for the Northern site as John did for the Southern site. This study has been done in cooperation with Paul Nelson and Associates and the Office of Economic Adjustment. They are in the data gathering stage and anticipate no problems on keeping with the contract due date.

Ralph reported that either he or Phil have met with most communities with the exception of Juab County Commission and Kanarraville Town. A tentative FY 1982 budget was handed out for review. This is a first cut and itemizes general areas for your information. Studies have been identified and will be put into a work program at a later date. Chairman Johnson indicated that this budget will be approved by the Board at a later date.

CONTRACTS AND FUNDING REQUESTS

Ralph indicated that we are looking at six items that we need to have action on.

1. The first contract is with John Sanger and Associates. It is a very important contract and needs to be conducted by someone with experience in this area. This contract will analyze the parameters of the fiscal impact study. This is not to do a complete fiscal impact study but rather to scope one. The negotiated form of bidding was used in order to save time. We are working with Keith Dotson, FCRC, on this contract. It was felt by Ken and Ralph that no one in Southern Utah would

be able to conduct this study. The contract amount would be approximately $14,000.00. This is a joint study with the State MX Office and was approved earlier on the state level.

BEN ROBISON MADE A MOTION TO APPROVE THE JOHN SANGER ASSOCIATES CONTRACT FOR A LOCAL FISCAL RECONNAISSANCE EFFORT NOT TO EXCEED FIFTEEN THOUSAND DOLLARS ($15,000.00). MOTION WAS SECONDED BY JIM CLARK. MOTION CARRIED.

2. Five County Association of Governments Contract for Beaver County to compare and update master plans and zoning ordinances. This was scoped by John Williams at the request of jurisdictions. An aggregate figure of sixty-three thousand dollars for the Beaver County study was proposed.

MAX GARBETT MADE A MOTION TO APPROVE THE FIVE COUNTY ASSOCIATION OF GOVERNMENTS CONTRACT FOR BEAVER COUNTY AND MUNICIPALITIES MASTER PLANS AND ZONING ORDINANCES NOT TO EXCEED SIXTY-THREE THOUSAND DOLLARS ($63,000.00). MOTION WAS SECONDED BY ROY YOUNG. MOTION CARRIED.

3. Iron County and Municipalities Contract. Ralph explained that Iron County has more jurisdictions and some have decided to go with private sector contractor. Iron County, Parowan, Paragonah, Brian Head, Cedar City, and Kanarraville have elected to go with APA Associates out of Salt Lake City. They were already doing work with Parowan, Brian Head, and other jurisdictions. Ralph indicated that Commissioner Dee Cowan had given approval for Iron County to go with APA Associates. Enoch and Enterprise have elected Five County Association of Governments. The total proposed amount for APA Associates is $65,000.00 and the Five County Association of Governments is $18,000.00.

LEE FIFE MADE A MOTION TO APPROVE THE CONTRACT WITH APA ASSOCIATES NOT TO EXCEED SIXTY-FIVE THOUSAND DOLLARS ($65,000.00) AND THE CONTRACT WITH FIVE COUNTY ASSOCIATION OF GOVERNMENTS NOT TO EXCEED EIGHTEEN THOUSAND DOLLARS ($18,000.00). MOTION WAS SECONDED BY ROY YOUNG. MOTION CARRIED.

4. John Short and Associates Contract for a Tax Base Study. Stephen Pace is the Principal. The proposed budget amount is $39,700.00 for this study. Ralph explained that he and Ken approached a firm out of Washington, D.C. and Stephen Pace for proposals. Only Stephen Pace submitted a proposal to conduct this study. Ralph indicated that twenty percent (20%) of the total contract amount will be paid by the State MX Coordination Office. The larger share of this study will be paid from our budget due to the fact that the focus is on the local area. This study will examine taxing and tax base issues. Staff from John Short and Associates will be in the local jurisdictions to talk to elected officials.

MAX GARBETT MADE A MOTION, SECONDED BY CLAUDE LOMAX, TO APPROVE THE JOHN SHORT AND ASSOCIATES CONTRACT FOR A TAX BASE STUDY NOT TO EXCEED FORTY THOUSAND DOLLARS ($40,000.00) OF WHICH TWENTY PERCENT (20%) WOULD BE FUNDED BY THE UTAH STATE MX COORDINATION OFFICE. MOTION CARRIED.

5. Peat, Marwick, Mitchell and Company Contract to scope setting up a fiscal management system for impact mitigation. Ralph emphasized the importance of putting in place a system to deal with impact mitigation funds. This work needs to be done now. This approach is tied to the block grant and is a effort to show that we are fiscally competent on a local and state level. The total contract for this would be $33,990.00. Our share would be $17,000.00 and the State MX Office would pick up the difference. The block grant legislation will require assurances

that we can handle money properly. Ralph stated that he has spent considerable time in Washington, D.C. working on the block grant legislation and this will be a product that can be useful in the implementation of those efforts. As staff he feels that after consultation with the State of Utah, we need to scope this study. This money will be well spent as it reinforces the block grant approach. We need to streamline the process for funding and would be behind if we do not more on this study. Commissioner Jim Clark questioned the need for this study in light of the current status of MX deployment. It was pointed out that all contracts will contain a clause for termination.

LEE FIFE MADE A MOTION TO APPROVE THE PEAT, MARWICK, MITCHELL AND COMPANY CONTRACT FOR SCOPING A FISCAL MANAGEMENT SYSTEM NOT TO EXCEED THIRTY-FOUR THOUSAND DOLLARS '$34,000.00) WITH THE POLICY BOARD SHARE BEING SEVENTEEN THOUSAND DOLLARS ($17,000.00) AND THE DIFFERENCE COMING FROM THE STATE MX COORDINATION OFFICE. MOTION WAS SECONDED BY LEON PEXTON. MOTION CARRIED. JIM CLARK VOTED NO TO THE MOTION.

6. A contract in conceptual form for Juab and Millard Counties. Leon Pexton presented to the Board a proposed plan for Juab and Millard Counties to address MX growth problems. The northern counties have almost all of the missile shelters and will have possible boom bust construction problems. In addition to MX, the IPP impacts will be occurring at the same time. Juab and Millard Counties have elected to look at what is a total picture for the next 18 months to 2 years. This approach will analyze total details rather than taking one issue at a time. This is being presented in conceptual form as a total package. Leon indicated that during the period of a months time they would have someone from the Policy Board Office help put the proposal into phases. There is an immediate need for this study. This study was approved conceptually by the Board.

CORRESPONDENCE

Ralph explained that two proposals are being considered as correspondence. One is from Southern Utah State College. It still has not been determined how to handle requests from higher education. Another proposal from the Paiute Indian Tribe in Southern Utah is being considered as correspondence. As they are wards of the federal government, we do not know how to treat this proposal. It has not been determined where they will obtain funding for projects. They will probably be given federal funds for planning. We need clarification before action can be taken on these two proposals.

Ralph discussed correspondence included in Board folders from the Washington County Commission, correspondence to the Townes Committee, a letter from District V Health Systems Agency, and EDAW correspondence.

OTHER BUSINESS

Chairman Johnson indicated that there has been a request to change the meeting schedule of the Policy Board and the Intergovernmental Working Group. Ralph explained that decisions are made at a rapid pace and sometimes we need things approved by the Board prior to the Working Group Meeting. It was suggested that the Board meet every 4th Wednesday and the Working Group every 4th Thursday of each month. Board members had too many conflicts on Wednesday. It was determined that Ken and Ralph should get together and work out a program that is satisfactory.

Ralph indicated that we need additional local representation on the Comprehensive Base Planning Process. Problems exist with the turn around time to make responses within five days. He explained that some reservations exist in regards to the Central vs the Southern Milford site. Four copies of the deliverables will be sent to our office and mailed to the Executive Committee for input from the Board. The state will have Ken Olson and Gary Tomsick as representatives to interface with EDAW. Iron and Beaver Counties are to select a member from each county to be on a team with Ralph Starr to discuss Base Comprehensive Planning issues with EDAW and the Air Force. Consensus of the Board was reached on this issue.

Meeting adjorned at 7:30 p.m.

MX POLICY BOARD

FY 1981 BUDGET

COMBINED/REVISED

May 28, 1981

A. Personnel:		
1. Positions:		
Director		$ 36,000
Assistant Director		30,000
Secretary		15,000
Part Time/Temporary		10,000
2. Fringe Benefits		21,500
	Total Personnel	$112,500
B. Travel:		
1. Director & Staff		$ 30,000
2. Chairman & Policy Board		30,000
	Total Travel	$ 60,000
C. Operating Expenses:		
1. Office Equipment Rental		$ 10,000
2. Office Rental		4,000
3. Office Supplies		5,000
4. Printing		6,000
5. Telephone		7,000
6. Postage		5,000
7. Conference Expenses		5,500
8. Publication Acquisition		1,000
9. Contracted Studies and Services		684,000
	Total Operating	$727,500
	Total Budget	$900,000

A G E N D A

UTAH STATE FOUR COUNTY MX POLICY BOARD

APRIL 23, 1981
BEAVER COUNTY COURTHOUSE
5:00 P.M.

I. MINUTES - MARCH 26, 1981 - REVIEW AND APPROVE

II. DEIS REPORT

III. WASHINGTON TRIP/LEGISLATIVE REPORT

IV. UDOT REPORT - ALEX MANSOUR

V. WORK PROGRAM SURVEY REPORT

VI. WORKING GROUP REPORT

VII. FISCAL MANAGEMENT AND PROCEDURES

VIII. IRON COUNTY FUNDING REQUEST

IX. OTHER

M I N U T E S

UTAH STATE MX FOUR COUNTY POLICY BOARD MEETING

Beaver County Courthouse
Beaver, Utah
April 23, 1981

MEMBERS IN ATTENDANCE	REPRESENTING
Chad Johnson, Chairman	Beaver County Commission
Mark Paxton, Vice-Chairman	Millard County Mayors
Roy L. Young	Beaver County Mayors
Ben H. Robison	Millard County Commission
Leoyd Lovell	Millard County Schools
Max Garbett	Juab County Schools
Leon Pexton	Juab County Mayors
S. Jack Sawyers	Iron County Mayors
Stephen L. Adams	Iron County Schools

MEMBERS ABSENT	
Karl Truman	Beaver County Schools
James L. Clark	Iron County Commission
Claude R. Lomax	Juab County Commission

OTHERS IN ATTENDANCE	
H.R. Starr	Director, MX Policy Board
Phillip B. Robison	Assistant Director, MX Policy Board
John Whitney	Washington County Commissioner
John S. Williams	Director, Five County AOG
Martin Prisco	USAF, Norton Air Force Base
Eric Zigas	EDAW, Inc.
Eldon Erickson	Office of Economic Adjustment
Major Bob McMains	MX Liaison Office
Larry Hoover	Six County Commissioners Organization
Alex Mansour	UDOT District 5
Joe Melling	Cedar City Manager
Lee Fife	Cedar City Council
Jeannine Holt	U.S. Senators Garn/Hatch
John C. Willie	Washington County
N.E. "Red" Wilson	Beaver County News/Milford
Georgia Beth Thompson	Cedar City MX Coalition
Florence Wolfram	Cedar City MX Coalition
Katherine Humphrey	Beaver Concerned Citizen
G. Montague	Cedar City Citizen
Elouise J. Montague	Cedar City, Iron Co. & Las Vegas
Joyce Johnson	Beaver County
Diane Lamoreaux	Secretary, MX Policy Board

WELCOME AND INTRODUCTIONS

Chairman Johnson called the meeting to order at 5:05 p.m. and welcomed everyone in attendance.

MINUTES - REVIEW AND APPROVAL

The minutes of the March 26, 1981 meeting were presented for approval. MARK PAXTON MADE A MOTION TO ACCEPT THE MINUTES OF THE MARCH 26, 1981 MEETING. MOTION WAS SECONDED BY JACK SAWYERS. MOTION CARRIED.

DEIS REPORT

Ralph reported that the comments and Governor's cover letter were released this morning in a press conference in Salt Lake City. Ralph indicated that in the folders under DEIS Review a list of members serving on the local teams, a copy of the Governor's cover letter, and the local comments could be found. Anyone desiring comments from the State teams or the University teams can obtain these from the State MX Coordination Office. Local comments will be available from our office upon request. The DEIS comment period has ended for the local teams. We will be sending these committee members a letter of appreciation and the local comments in final form. Ralph stated that the comments were remarkably similar from all three groups. These comments will go on to the Air Force for their consideration. It was indicated at the Working Group Meeting that it will take longer than 30 days to complete the final EIS. Colonel Van Dillen informed the group that the Air Force will take 60 days to finalize the EIS.

WASHINGTON TRIP/LEGISLATIVE REPORT

Ralph stated that last month a copy of sample block grant legislation was handed out to Board members. He indicated that a copy of the testimony given by Governor Matheson will be mailed out to members. Ralph reported that the Governor and Chad testified together in favor of block grant approach in front of Congressman Brinkley's committee. The Office of Economic Adjustment has been very supportive of this approach. DoD and the Air Force are still studying the approach. The White House has not responded to the legislation. The legislative package was well received. Ralph indicated that Governor List, a Clark County Representative, and a representative from Las Vegas also testified in this hearing.

UDOT REPORT - ALEX MANSOUR

Mr. Mansour reported that the UDOT District V Office still has not received authorization to proceed with the precondition survey. They have received a phone call saying that this is going to be approved but not to proceed until notification by letter has been received. His presentation was made to the Working Group in Salt Lake City at their meeting yesterday. This report calls for 200 million dollars of improvements in the State Highway System.

Mr. Mansour reported that he traveled to Ely, Nevada on April 16th to meet with William Nagle, Assistant Highway Director, and Allen Dowly, District Engineer. He indicated that their 6 and 50 analysis is identical to ours. One deficiency was with State Route 21, Beaver County to Nevada, improvements of road into Nevada was not shown. This road goes through Garrison, Utah and connects into Nevada. It also connects with U.S. 6 and 50. The State of Nevada will either have to improve this road or the State of Utah

will have to improve an alternate on our side. Nevada is going to readdress this road and will then let us know in regards to improvements to be done. Mr. Mansour indicated that another difference was in State Route 56 which connects with Nevada roads and goes into Panaca. The time frame is not the same on this road. Utah recently made improvements on this particular route but the Nevada side is in need of improvements. Nevada will have to do some early work on this road. Chairman Johnson asked the amount of the precondition survey proposed for county roads. Mr. Mansour indicated that he believed the amount was $30,000. He also indicated that he would like to put engineers and construction crews out on these roads as soon as possible. Ralph stated that Alex needs to be commended for amount of work that he and his staff have done on this project and the time in which they have done this.

ROY YOUNG MADE A MOTION TO WRITE A LETTER OF APPRECIATION TO ALEX AND HIS STAFF FOR THEIR EFFORTS WITH MX. MOTION WAS SECONDED BY JACK SAWYERS. MOTION CARRIED UNANIMOUSLY.

WORK PROGRAM SURVEY REPORT

Either Phil or Ralph will be to 20 different local meetings this month and 8 are projected for May already. Ralph also indicated that efforts will be made to schedule future meetings with these groups. We are attempting to remedy our communication problems and ask for any suggestions for ways to improve. Meetings with City Councils, Boards of Adjustments, and County Commissions have been attended by both Phil and Ralph throughout the area. Updates have been given on MX and surveys have been conducted to find out where Master Plans and Zoning and Control Ordinances stand and what needs to be done to update them in relation to MX. Most jurisdictions do not have MX figures put into their master plans. As the surveys are completed, we will find out where deficiencies are located. This is part of the Work Program and needs to be addressed. We have some $684,000 for studies and have a Work Program that says we should be at certain points at certain times. Later on agenda, we will be looking at a conceptual presentation from Iron County. The other counties should be interested in this type of proposal being conducted soon. If this approach is successful, it could be used as a model in other counties. Another study that is being scoped is one dealing with erosion of local tax bases. According to our Work Program, we should be proceeding with these studies. We need to identify contractors to work with master plans, zoning and special studies and get going on these projects.

Phil asked Mayor Young and Mayor Paxton if the meetings held with their councils were helpful. He asked if they would like either he or Ralph to attend future meetings. Both Mayor Young and Mayor Paxton expressed appreciation for efforts on the staffs part to attend meetings and felt it was very helpful to share information with their councils. All members of the Board felt this was a helpful service and should be repeated on invitation of each entity. Phil suggested that a contact person be established from local entities and he will serve as a contact in our office. Each jurisdiction will be handled upon request to attend meetings. Ralph and Phil both indicated that when new information becomes available, our office will request time on agendas. Mayor Sawyers stated that he feels it is important that a contact person be established and our office continue to meet with jurisdictions upon request. Ralph asked that Board members go back to boards and councils and make monthly reports on our meetings. Board members expressed their appreciation for efforts to update jurisdictions.

WORKING GROUP MEETING REPORT

Ralph asked for executive members to comment on the Working Group Meeting held in

Salt Lake yesterday. Mayor Sawyers commented on the need to insist on the State giving information before hand and the need to review information before action is taken. Chad stated that he was referring to three (3) grant requests; two from the Six County Commissioners Organization. He stated that the Working Group will be the A-95 review group for MX related matters. At the meeting yesterday, three requests were presented for approval. Chairman Johnson indicated that the problem with information dissemination will not happen again. We have insisted that copies be sent out prior to meeting so that we will have time to react. Ralph reviewed the John Sanger and Associates proposal for scoping the fiscal impact study. This proposal was included in the Board members three ring binders. Ralph briefly mentioned the HRS study conducted for the Air Force which has not received many favorable comments from the State and Locals. The HRS study is not a fiscal impact study. The fiscal impact study will be jointly sponsored and will have input from local, state, Air Force, OEA, COE, and other entities involved. This is a very important document. Mr. Sanger does not go into computer modeling. He uses a case history approach which is hand computed and then calculates impacts for aggregation. We have not received agreement from the Air Force, COE, OEA that this is how they want to handle this study. Our share for this study would be $7,000 and the other half will be picked up by the State MX Office. Members were asked to review and decide how they would like to proceed.

Another study (Peat, Marwick, Mitchell and Company) deals with a proposal to scope a study to examine program and fiscal management procedures for impact mitigation funds. This proposal will be mailed out to Board members within the week. Our share would be $18,000 with the State funding the other half. They have agreed to do the analysis for $36,000. We will need to make a decision next month on this matter. Ralph expressed that this is a high priority item. We need to convince the Feds that we are capable of handling fiscal and program management in the region.

Ralph indicated that he and Ken did seek John Sanger for the fiscal impact study due to recommendations and his past work in Kitsap County. He also stated that he made calls to Washington and Salt Lake City on the erosion of local tax base study. Before any contract is signed for either of these studies, this will be brought back to the Board for approval.

FISCAL MANAGEMENT AND PROCEDURES

Chairman Johnson reported that last month we approved the Fiscal Management Policies and Procedures and this system has been put on line for the FY 1981 funds. The Travel Policies and Procedures were handed out for review but no action was taken. Phil explained that two minor changes have been made to the travel policies and procedures. First, travel by 1st class by air has been eliminated. Second, the Director will sign travel reimbursements as opposed to the Assistant Director. MOTION WAS MADE BY ROY YOUNG, SECONDED BY MARK PAXTON, TO APPROVE THE TRAVEL POLICIES AND PROCEDURES WITH ABOVE CORRECTIONS. MOTION CARRIED.

Phil indicated that he did not build a grevience procedure or merit system into the Personnel Policies and Procedures. Ralph stated that in order to conform with the requirements of the OMB circulars we had to come up with our own policies and can refer to our policies instead of being totally bound by circulars. MOTION WAS MADE BY JACK SAWYERS, SECONDED BY STEVE ADAMS, TO APPROVE THE PERSONNEL POLICIES AND PROCEDURES. MOTION CARRIED.

Phil reported that the fourth document, Procurement Policies and Procedures, was mailed Monday, April 20th. This incorporated the $5,000 spending limit and any action over $5,000 would take formal Board action. Anything over $100,000 must go before the Working Group and FCRC for review. MOTION WAS MADE BY LEOYD LOVELL, SECONDED BY STEVE ADAMS, TO APPROVE THE PROCUREMENT POLICIES AND PROCEDURES. MOTION CARRIED.

Ralph indicated that the above mentioned documents will be printed and bound into one document and distributed. Ralph also asked about a quarterly financial report. ROY YOUNG MADE A MOTION THAT A QUARTERLY FINANCIAL BRIEFING BE PRESENTED TO REVIEW EXPENDITURES. MOTION WAS SECONDED BY JACK SAWYERS. MOTION CARRIED.

IRON COUNTY FUNDING REQUEST

Joe Melling, Cedar City Manager, was asked to present the Iron County funding request. He stated that in meetings with Mayors throughout Iron County problems keep coming up in updating master plans. Master plans have been done by different entities and county and communities. Inconsistencies have been found in master plans and zoning ordinances. There is a need to identify these and ameliorate them. All communities have own unique characteristics and we do not propose to change their identity. There is, however, a need to coordinate certain things between jurisdictions. There is a need to start to develop these policies if growth is going to take place. We need to look at this proposal conceptually. Iron County did contact a consulting firm to determine hourly rates of pay. These were $37.00 per hour for professionals and $17.00 per hour for staff support plus travel costs. One contract to handle all entities in the county is proposed. There will be spot building and zoning if the county does not handle this as a coordinated effort. A single consultant could sit down with the county and each community. Leon Pexton stated that a local option must still be maintained for this inventory. Ralph explained the process in phases. Phase I will examine master plans and zoning ordinances and get an MX update. Phase II could include a consultant to develop overall approach, analyze and compare Phase I documents for inconsistencies Phase III could consist of some form of standardization on key areas in zoning and control ordinances. Ralph indicated that we are asking for conceptual approval to consult with some firms to come up with a proposal next meeting.

LEON PEXTON MADE A MOTION TO CONCEPTUALLY APPROVE THE IRON COUNTY PROPOSAL AND AUTHORIZE CONTACT OF CONSULTANTS. MOTION WAS SECONDED BY MARK PAXTON. MOTION CARRIED.

OTHER BUSINESS

1. Rapid Growth Management Meeting: Commissioner Whitney reported on the Rapid Growth meeting. He indicated that this committee is in the process of formulating an agenda with the Air Force for a meeting to be held sometime later in May. As soon as this agenda is in final draft, it will be sent to the Board. Some of the problems being dealt with are: (1) Funding, (2) Recruitment of labor. We need to get answers from the Air Force on these issues. Also being discussed are: (1) Synthetic fuels, and (2) electric power. They are trying to correlate all rapid growth issues.

2. Citizen Advisory Committees: Ralph indicated that updated lists are included in the folders. All committee chairmen will be receiving agendas for attendance at State and Bi-State meetings. It has been suggested that these committees review the Phase II draft. These committees have not met yet, but each committee will travel at the request of the Board and travel expenses will be paid. Commissioner Whitney or a member of his committee will travel to the meeting in Carson City, NV in May.

3. County Proposal: ROY YOUNG MADE A MOTION TO EXTEND THE SAME PROPOSAL AS IRON COUNTY TO BEAVER COUNTY AND OTHER COUNTIES. MOTION WAS SECONDED BY BEN ROBISON. MOTION CARRIED. Conceptual approval of the proposal is for all counties.

4. OEA Report - Eldon Erickson: Eldon indicated that the Office of Economic Adjustment has been working on getting approval for the precondition survey and have received confirmation on this approval. He indicated that an additional component has been added to the HSG study for further definition of boom town impacts. He also indicated that within the next two or three weeks they will be finishing portions of the Nevada study on housing and will be conducting a similar study for Utah. Hopefully at the next meeting he will have the housing analysis available for the Board. Eldon also discussed the possibility of a joint OEA and Policy Board workshop for planners. This planning workshop would bring together planning boards, county commissioners, mayors, and individual citizens to sit down together and consider exploring problems resulting from growth in communities in the impact area. This type of workshop can be extremely useful in situations we might be facing. Bob Rauner, Director OEA, is an economist and has utilized these kind of mechanisms in the past. This past week he asked the OEA staff to look into ways and methods that have been used and come up with recommendations for the proposed workshop. This workshop could be held in the near future. A tentative date would be sometime in May and could be held at Brian Head in some type of retreat. Eldon suggested that we go two full days and have very concentrated workshop. This could involve 50-60 people.

5. Comments - Bob McMains: Chairman Johnson congratulated Bob McMains on his recent promotion to Colonel and asked if he would like to make comments to the Board. He indicated that the Air Force is pressing full speed ahead with development. The Secretary of Defense says they are staying with 1986 as the target date. The non-government group appointed by the Secretary of Defense will be meeting again in a few weeks and then will be making their report. The date for a decision is slipping a bit according to rumors and will be the end of June now. July 1st the decision on basing mode will be released and the EIS will be published after that. He expressed appreciation for the efforts that have been made locally to get comments for the EIS.

6. Martin Prisco - AFRCE: Martin indicated that he works in the Environmental Planning Division out of Norton Air Force Base. As they get into land use planning, he would like to work closely with our Board. He expressed interest to help in any way he can.

7. Eric Zigas - EDAW: Eric is involved in the Base Comprehensive Planning with EDAW. He indicated that he will be attending Policy Board meetings and will be involved locally in the planning effort. The Board will receive copies of materials for review when the Air Force receives them. The Work Plan and Land Use Plan should be received soon. EDAW would like to hold meetings here in the deployment area instead of San Francisco. This is a 15 month contract and limited meetings will be held in San Francisco. They are proposing to hold one meeting at the state level and one meeting at the local level for review.

8. Correspondence and Bulletins: Ralph indicated that correspondence will be sent for informational purposes. Included in the folders were letters from the Utah Health Systems Agency, and the Six County Commissioners Organization. Semi-monthly bulletins will be released to press to let everyone know what the Board is doing.

8. Next Meeting: Working Group Meeting will be held in Cedar City on May 27th at 1:00 p.m. at either the College or the Sugar Loaf Cafe. Policy Board Meeting will be that evening in Beaver, Utah at the Courthouse. MAYOR SAWYERS MADE A MOTION, SECONDED BY STEVE ADAMS, TO ADJORN MEETING. MOTION CARRIED. Meeting adjorned 7:00 p.m.

PHASE II IMPACT STUDY

MEETING ATTENDANCE ROSTER

Elected Local MX Meeting
Milford
May 2006

Name	Position	Community
Jeannine Holt	Council	Enterprise
B. [illegible]	Mayor	Milford
[illegible]	council	Milford ut
Jeff Marshall	council	Manderfield
Ruben W Dotson	Mayor	Minersville
Hale T Eyre	Treasurer	Minersville
JOHN C. GAILEY	CITY MANAGER	ENOCH
GORDON R. BAKER.	City MANAGER.	Beaver
Joe Keeler	Council	Beaver
Robert D. Christiansen	Mayor	Beaver
[illegible]	Commissioner	Beaver
Stanley Ingleby	mayor	Paragonah
Fran-S. Kelly	council	Paragonah
Craig Davis	Council	Minersville
Rhead Bowman	Five County AOG Consultant	
[illegible]	Five County AOG	
Keith Bacon	Council	Beaver
Henry Willesen	"	"
Antonia M. Beatrice	Lab. Planner, EDA,	San Francisco
Wayne Wiseman	B.C. Planning Comm.	Milford, Utah
N.E. "Red" Wilson	Beaver County Mayor	Milford, Utah
John C Maxey	Milford Hosp / City Council	Milford UT

SERVICE PROVIDERS LETTERS

UTAH HEALTH SYSTEMS AGENCY

19 WEST SOUTH TEMPLE, SALT LAKE CITY, UTAH 84101 (801) 581-3476

RECEIVED
APR 20 1981
MX-POLICY BOARD

April 17, 1981

Mr. H. R. Starr
M-X Coordinator
Four County M-X Policy Board
444 South Main, Suite A-1
Cedar City, Utah 84702

Dear Mr. Starr:

I am writing to request your assistance in identifying the health and related human services impacts of M-X construction in Beaver, Iron, Juab and Millard counties.

As you may know the Utah Health Systems Agency is mandated by federal and state statute to conduct health planning and resource development activities for the residents of Utah. In carrying out this responsibility our Agency works closely with each of the State's seven Associations of Governments. Through both formal and informal interagency agreements this relationship eliminates duplication of effort and maximizes the utilization of shared staff expertise and agency data.

In collaboration with the Five County AOG and Six County Commissioners Organization the Utah HSA solicits financial support from the M-X Policy Board to complete an M-X impact Health Care Needs Assessment Plan and Resource Development Proposal for the four county area.

After examining the Draft Environmental Impact Statement (DEIS) on the M-X Deployment Area Selection and Land Withdrawal/Acquisition and the related Environmental Technical Reports, we conclude that insufficient analysis has been devoted to assessing needs for health care services. Although the DEIS estimates for M-X population growth vary, the impact upon the existing community health care delivery systems in the Five and Six County areas will be significant.

Many of the problems and pressures that existing community delivery systems must deal with as a result of rapid and major population growth can be anticipated and mitigated through proper planning.

In coordination with AOG and Commissioners Organization staffs the Utah HSA stands ready to assist the four county M-X Policy Board in identifying the health care needs of impacted communities and designing the system increments necessary to deliver accessible and quality medical care to the four county residents.

Upon your request we will be happy to provide budget and work program proposals defining a scope of work and timeframes for product completion.

Thank you for your consideration.

Sincerely,

Stephen H. Bonney
Executive Director

SHB/mh

cc: Mr. John Williams - Five County AOG
Mr. Carval Magalaby - Six County Commissioners Organization

Social Services

Scott M. Matheson, Governor, State of Utah
Anthony W. Mitchell, Ph.D., Executive Director

May 7, 1981

Chad Johnson, Chairman
Four County "MX" Board
140 West 200 North
Beaver, UT 84713

Dear Mr. Johnson:

It would be helpful to have the Five County AOG staff look at select and certain services that we provide in regards to the impacts that "MX" may have on those services. The type of services that we would like reviewed would be Mental Health, the Alternatives Program, etc. This would be beneficial as we plan for the future in regards to the population influx that is anticipated as "MX" becomes a reality. There will certainly be a devastating effect upon our services and the staff that we currently have.

As you are probably aware, the Five County AOG has for some time been involved in planning as far as Social Service programs are concerned. This has been designated as bring part of their function.

If you have any questions or need additional information, please get in touch with me.

Sincerely,

Richard J. Garrett

Richard J. Garrett, Director
District V, Family Life Services

RJG/cah

Family Life Services District 5
(Beaver, Iron, Washington, Garfield, Kane)
Richard J. Garrett, Director

551 South 300 East
P.O. Box 880, St. George, Utah 84770
801-673-9691

An Equal Opportunity Employer

Southwest Utah District
Health Department

REPLY TO
551 SOUTH 300 EAST, ST. GEORGE, UTAH 84770 / 801-673-3528 ☐
1552 WEST 200 NORTH, CEDAR CITY, UTAH 84720 / 801-586-2037 ☐
110 WEST CENTER, KANAB, UTAH 84741 / 801-644-5024 ☐
565 NORTH MAIN, PANGUITCH, UTAH 84759 / 801-676-8800 ☐

May 1, 1981

RECEIVED
MAY 19 1981
MX-POLICY BOARD

John Williams
Executive Director
Association of Governments
620 South 400 East
St. George, Utah 84770

Dear John;

With the return of Beaver County to the Southwest Utah Health District, the likelihood of becoming involved in planning of a major nature for effective and efficient public health services for a large population impact within the district boundaries is very much enhanced. There is no question that very significant growth will occur, the question is how soon, how much and where. It is anticipated that the population impact will come in two waves of a totally different type. The first will be the construction phase with these workers and their families staying only until that phase of construction they are working on is completed and then moving on. The second phase will be the operating and maintainence crews , in this case, from what information is present, will consist of a small permanent Air Force base somewhere in Utah with a larger base in Nevada.

Determining how many construction workers will arrive on what schedule and where they will be housed is the responsibility of the Air Force and this is information is essential to effective planning, particularly in relation to seeking appropriate funding from Federal and other sources for public health services delivery during the construction phase.

I need to know the amount of this impact and the timing of this impact in order to guage the need for public health personnel, equipment, and office space.

Where permanent bases are established, public health services from the Health District will be needed only if some personnel and or their families reside off-base. If off-base residence is to occur, the numbers of persons and locations of housing need to be known. From what I have heard, it is probable that in Utah the entire

population associated with permanent basing will be housed on-base because of remoteness and lack of facilities available. The Air Force would provide all public health services needed under these circumstances with their own personnel and funding.

When the transition from construction to permanent basing occurs, a phase out of some or all of the public health services supplied during construction will be necessary, depending on the decision to house all permenent personnel on base or not.

Until the above listed basic information is available from the Air Force, prior planning can at best be only a guess and not accurate enough to proceed further with at this time.

Basic formulae are available that can be rapidly applied to final planning for public health needs when numbers, timing and location of personnel involved in all phases of the MX program are known. Knowledge of the health problems that develop as a result of sudden growth of this nature has been sought out and any planning that is done will incorporate these historical facts into the basic formulae.

Sincerely,

Ray G. Cowley, M.D., Director
Southwest Utah District Health Department

RGC/jj

CC: Guy Thompson

ATTACHMENT I - COMMENTS ON MX DEIS & ETR'S

RECEIVED
JUL 14 1981
FOUR CORNERS REGIONAL COMMISSION
ALBUQUERQUE, NEW MEXICO

ATTACHMENT 1

COMMENTS ON THE MX DEIS AND ETRs

MX MISSILE POLICY BOARD

ATTACHMENT 1

COMMENTS ON THE MX DEIS AND ETRs

MX MISSILE POLICY BOARD

LOCAL WILDLIFE REVIEW TEAM

General Comments

From a wildlife resource viewpoint, review of the MX DEIS document is as monumental a project as the original collection of data and writing it must have been. The West Desert of Utah is a complex mix of desert ecological communities which, while the resources present are not abundant, are unique and fragile. A project the size of MX will change the ecological relationships of this entire area. The total impacts either direct or indirect cannot be thoroughly covered in a document of this scope. The comments in this review are an attempt to highlight specific problem areas so that future studies and the FEIS can begin to properly address wildlife impacts. Currently the Utah Division of Wildlife Resources does not have the staffing to properly take part in the surveys and site-specific documents that must be prepared. The division has been contracted with in the past to supply detailed biological information and can easily assemble the people to do so on any Utah phase of the MX project.

Specific Comments

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Figures 1 and 3				Figures 1 and 3 are difficult to read because of the scale and grey-on-grey display.
	5	6	1	It is hoped that in addition to mitigation of adverse economic impacts, the biological impacts will be fully mitigated also.
	7	partial	1-2	It is disturbing to read that a FONSNI (finding of no significant new impact) in Tier 2, will be done only at the level of an EA (environmental assessment). This will have the affect of breaking up the environmental effects into separate and unrelated packets of information with little correlation being made to the total impact of the project. This could result in an inadequate analysis and a lessened mitigation of overall wildlife impacts.

PAGE	PARAGRAPH	SENTENCE	COMMENT
9	2		We note that the Air Force in its MX environmental planning expects to use the "mitigation-by-avoidance" technique. This technique will be mainly used with threatened and endangered species (T and E), and to a lesser amount, with others. This overemphasis of effort on the T and Es may lead to some significant impacts to other major segments of this fragile desert ecosystem.
9	4	3	The continued monitoring of wildlife populations during the project should be done in conjunction with the state wildlife agency, since they consider the long-term perspective in wildlife management, have the expertise on staff and possess the past records on wildlife populations in the project area.
10	2	3-4	Describing the impacts to springs and seeps as temporary during the construction phase is an extreme simplification. The limiting environmental factor for many desert wildlife populations is water. Reduction or elimination of flows at springs and seeps may cause "temporary" impacts to the aquifer, but have very permanent effects on the wildlife associated with that water source.
12	2	2	Revegetation of disturbed areas from this project may become more monumental than expected unless prodigious efforts are made during the project. Variable and

PAGE	PARAGRAPH	SENTENCE	COMMENT
			limited rainfall coupled with cyclonic winds in these desert areas makes revegetation and erosion control more than just a factor in good construction practices. Loss of the limited topsoil in the project area may push revegetation times from 50 years to millennia.
14	4-5		Discussion of air quality impacts to Milford by the Milford OB seems to be missing from this section. All other Utah OBs are mentioned.
15	2	5	Wind energy sources should be seriously considered in these West Desert valleys. Average annual windspeed may make this a feasible alternative energy source.
17	1	1	Comparison of unquantified energy resource development impacts with the full basing impacts to vegetation is rather a fallacious comparison. The latter may impact 250 square miles of vegetation while the only current energy development in the West Desert is IPP.
17	5		Again, we note that natural recovery of vegetation may take more than 40 years, and might not occur at all without a comprehensive revegetation program during and after construction.
19	1-3		Probably the most significantly affected big game species in the project area will be the pronghorn antelope. Key habitats for this animal are located throughout most of the

PAGE	PARAGRAPH	SENTENCE	COMMENT
			DDA. Comments on acreages affected by roads, road margins, bunkers, OBs, etc., are specious and do not adequately reflect the sweeping impacts from this project. The potential exists here for entire herd groups and possibly whole herds to be wiped out by this project. Minimizing and mitigating these losses will require extensive efforts. This could best be done by direct contractual work with the state wildlife agency to provide biological data to detail the problems, and increase the numbers of enforcement personnel to protect the recovery programs when completed.
22			The Utah desert bighorn transplant program, issued January 1979, shows the following West Desert mountains as planned for transplants: Wah Wah Mountains, House Range, Pine Valley Mountains, Mineral Range, Confusion Range, Frisco Mountains, Sheeprock Mountains, Silver Island Range, Lakeside Mountains, Stansbury Island and the Dugway Range. We note that the Utah transplant program is not mentioned anywhere in this document. This program will definitely be impacted by this project.
24			Comments in this section reflect a lack of understanding of the current status of the Utah prairie dog (UPD) and the efforts necessary to re-establish a colony. Approximatley four UPD colonies have been re-

PAGE	PARAGRAPH	SENTENCE	COMMENT
			established in the Utah DDA with great efforts by teams of biologists and summer crews. These colonies are still only nuclei, and as such are sensitive to disturbance. Impact levels should not be considered small just because these populations are small. Any impacts to these colonies that might affect their populations and lessen their survival would be a critical or very significant impact.
27	3	1	Any reduction in fishing recreation opportunities should be offset with increases in plantings, hatchery production and/or conservation pool purchases. Funding for this would have to come from impact mitigation funds.
28	2		It is disturbing to see the old argument of total road access to every possible bit of ground surface. While this is a section on wilderness, it should be pointed out that some wildlife species need wilderness (roadless) settings to survive. Other species need undisturbed areas for portions of their life cycles; without this factor they will be greatly diminished or worse.
51	4		Add that powerline construction will be done in such a way as to almost eliminate raptor mortalities. This could be accomplished by installing large (138 KV) and small (25 KV) lines at least one-quarter mile away

PAGE	PARAGRAPH	SENTENCE	COMMENT
			from well traveled public roads to reduce shootings, and by proper configuration on powerpoles to reduce the chance of electrocutions. It should be noted that the 25 KV configuration shown (ETR 24, page 45) is not of the proper configuration and should be changed. The spacing between the "sky pin" and the eight-foot bar should be at least 42 inches to protect large raptors such as eagles.
56	3		Loss of water locations would reduce AUMs for livestock and wildlife. Water sources in the West Desert limit distributions of both livestock and wildlife.
58	1	1	This analysis fails to take into account the other resource developments in Utah which will tax available recreation facilities before MX is even built, i.e., IPP, Pine Grove Molybdenum, geothermal development, etc..
65	4		The same impacts should be placed in the wildlife section because archeological sites, camping facilities and wildlife concentrations are all found near water sources in the desert; significant indirect impacts will result from construction camp proximity.
1-2	3	5	The word this is misspelled.
1-16	5	3	A dust suppressant (palliative) is first mentioned here and then again several times in other chapters. Some concern exists as to the chemical composition of this palliative since it is

PAGE	PARAGRAPH	SENTENCE	COMMENT
			implied later that it could "contaminate" surface waters. Since 6200 miles of dirt cluster roads are eing considered in this project, we are then talking about huge quantitities of a chemical with unrecognized toxic effects in the biological cycle.
1-25	5	1	The possibility of 60 long-range radar sites on topographically elevated locations presents some hazards to raptors that may use these sites for nesting if they contain cliffs.
1-26	1	1	Commercial transmission line power sources will go to 120 power distribution centers which will mean a great many 135 KV and 25 KV power-poles. To prevent excessive losses to electrocutions on the smaller poles, raptor guidelines must be followed as mentioned earlier.
1-32	7	1	The word ordinance is misspelled.
1-61	partial	1	Again, we must note that while the Tier 1 MX DEIS is massive, the Tier 2 documents (which will determine the actual level of impacts to wildlife) will only be EAs, and their main thrust will be to determine whether any significant new impacts have been found. We look forward to reviewing the documents that will give details on the mitigation procedures and detail the plans being considered. The state wildlife agency will be acutely interested in this information and should

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				be involved in formulating it.
	2-14	2		This section would be a good place to mention the habitat ranking system used and its location in the technical reports.
Figures 2.1-4	2-17			The legend is in error. Is it to be presumed that the "study area" is supposed to be light grey? Also, what are the red areas?
Figure 2.1-5	2-18			See comment p. 2-17.
	2-59	3	4-5	Suddenly we are confronted with square nautical miles after many pages and tables of square miles and acres. This should be changed to statute miles to be consistent with the rest of the chapters.
Table 2.2-3	2-62			Units of measure on this table are a confusing mix of statute miles, nautical miles and acres.
Figure 2.2-1				The pale green markings on this (and other) figures is very difficult to read. More contrasting colors would have helped. The DDA background color obliterates so much of the map that it confuses the reviewer.
	2-67	4	5	It is mentioned in this paragraph (and several more times in the text) that no water is planned for revegetation. Without it, it is admitted that revegetation could take 40 years. Treated wastewater should be considered for such uses, especially in areas with high erosion potential.

PAGE	PARAGRAPH	SENTENCE	COMMENT
2-102	2		The proposed project list in this paragraph should be updated. Four of the projects are operational, one is nearing completion and, another is buying large components and starting construction--they are no longer "proposed."
2-103	5	1	The end of this sentence is confusing. Suggest changing it to "...and fish-fished, hunted, and observed by man."
2-103	6	3	If fish and wildlife currently on BLM lands are to remain stable, then some (such as mule deer) would be doing so at extremely low population levels. The Utah Division of Wildlife Resources has provided the BLM with long-term stable population level figures for all big game species and these should be used as a basis for comments such as found in this paragraph.
2-104	4	2	Maintenance of the "status quo" with imperiled species should not be the goal of any impact assessment. Imperiled species are usually on the knife-edge of survival and keeping them there only prolongs the inevitable. Only active programs to improve their status through habitat preservation and species management should be considered.
2-105	2	2	It would be more instructive to give the acreage of wilderness being considered in the region, compare that to the acreage in the region or the states of Utah and

PAGE	PARAGRAPH	SENTENCE	COMMENT
			Nevada instead of using an instigatory phrase like "the size of Delaware."
2-106	2	3	Again, this should be updated to show that Continental Lime is operating, Martin-Marietta is nearing completion and IPP is actively in the construction phase.
2-210	2	1	Include a reference to ETR 24 (page 13) for an explanation of what electric regions 27, 28, and 30 include.
2-115	4	3	Reference is made in this section to a local water table decline or a cone of depression around an active water well. Tests and computer projections at the Alton Coal Fields show this to be as bad as six feet at ten miles after several years. Is this the impact possible with this project? If so, mitigation efforts and monitoring for wildlife will have to be expanded.
2-121	partial	1	There is a typographical error.
2-121	3	2	The term "moderate impacts" to hydrologic subunits is used in relation to long-term impacts. Thirty plus years of pumping in already depressed aquifers has got to have long-term (50 years?) impacts such as settling or permanent cessation of flows to some springs. Water sources in the West Desert of Utah are a limiting factor and loss of any number of them could

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				be critical to wildlife and livestock.
Section 2.3.6	2-127-128			One factor that is inadequately covered is the relation of highway mortality to antelope populations. A mineral processing plant recently constructed in the West Desert of Utah caused a tripling of the highway mortality for a small antelope herd unit by interfering with the normal herd movements. Similar and even more widespread herd movement disruptions will occur with MX construction. Speed limit reductions in migration areas are one means of controlling this factor.
	2-127	4		It is possible that the five factors mentioned in this paragraph could greatly reduce long-term impacts to antelope, but without being carefully coordinated with the state wildlife agency, these efforts will be less effective.
	2-127	5		No mention is made of the four antelope guzzlers constructed in the Shauntee Hills by the Utah Division of Wildlife Resources in the early 1970s. These water structures have greatly aided the increase in the antelope herd in this area. The Milford OB site will destroy their effectiveness and usefulness almost entirely. The extirpation of antelope from the Milford OB (ETR 15, page 62) is considered a likely result of construction and human activities in the area. The aforementioned

PAGE	PARAGRAPH	SENTENCE	COMMENT
			guzzlers will then have lost their function completely, and their loss will have to be mitigated.
2-127	6	1	It would be more adequate to say that the other Utah pronghorn antelope populations potentially could be significantly reduced during the construction phase of the MX project.
2-128	2		The impacts to sage grouse will be less obvious than to pronghorn antelope, with most of the effects being indirect. Leks and brooding grounds in areas surrounding the Milford and Beryl OBs will have increased disturbance from ORVs and human activities, which will result in reduced natality. Reduced populations will lead to reductions in the legal hunting season take and reduce recreation opportunities. The suggested increased policing of ORVs and hunting can only be accomplished if outside funding becomes available to the state wildlife agency. Current funding restraints have not allowed any new Utah conservation officer positions to be added in the last ten years despite a virtual doubling of the officer-to-licensed-recreational-user ratio. Further, rapid population increases can only worsen this situation.
2-129	7	1	While no currently active bighorn sheep habitat is near the Milford OB or even the Beryl OB, many of the

PAGE	PARAGRAPH	SENTENCE	COMMENT
			West Desert mountain ranges are listed for future transplants. The Wah Wah Mountains were being considered for one of the first reintroductions of desert bighorns concurrent with their listing as a proposed BLM wilderness area. Water is a limiting factor on the summer range for these proposed transplants, and possibly some of the mitigation for the irreversible and irretrievable habitat unit losses for antelope can be applied to these desert bighorns through water source development and transplant funding.
Section 2.3.10			While it may be true that the DTN and missile shelters are not planned on top of any prairie dog colonies, and this document attests that no direct impacts will result to the colonies, this is (in reality) very unlikely. Construction workers are not known for their ability to discriminate between "squirrels" and "dogs." One piece of heavy construction or earthmoving equipment passing through one of the several fragile, recently re-established colonies could cause considerable direct damage. For colonies to survive the direct and indirect impacts of the construction phase of this project, considerable management efforts will have to be made. Another indirect impact that has not been addressed thoroughly are the possible effects of

PAGE	PARAGRAPH	SENTENCE	COMMENT
			the dust palliative that will be so extensively used on the dirt roads of this project. This question has not been addressed and must be considered early in this project. Prairie dogs cannot be easily moved and are greatly restricted in their home range. Contamination of the soil or vegetation within this range could eliminate the colonies. The re-establishment of these delicate nuclei colonies in Pine Valley was accomplished over the last few years at great effort and expense. Mitigigation of any impacts to these animals will be complicated and lengthy.
2-150	6	1	Water project developments for livestock will also affect wildlife. Tanks and troughs must be engineered to allow access and prevent drownings. Simple additions like floating covers on open tanks reduce evaporation and provide safe landings for birds while preventing drownings. Separate wildlife water sources need to be provided in some areas where livestock water sources are left dry at the end of the grazing season. Failure to do this can result in the death of wildlife populations that become dependent on the livestock water sources.
Section 2.3.35			Quarry and pit development for construction materials is usually done in foothill areas. In the West Desert of Utah, these areas are often winter ranges for deer and elk, and fawning areas

PAGE	PARAGRAPH	SENTENCE	COMMENT
			for antelope. Raptors often use cliff areas in these foothills for nest sites and thus construction material sites must have very detailed EAs done on them to assure the least impact possible.
2-160	2	2	While the direct impacts to antelope would be similar between Milford and Beryl OBs, with no "key" habitat being lost, it should be noted that key habitats (winter range, fawning areas, etc.) have not been well-identified, so their loss will not be noted until populations decline from unknown causes. Antelope are a mobile species that adapt to small changes in habitat conditions. Storm patterns in the West Desert can cause greatly different spring green-up in one portion of a drainage basin and not in another. The antelope will move to the improved range if no barrier exists. Thus, in one year, antelope may be absent from one part of their range. We assume that limited observations of this type have resulted in the disrupted distributions shown in Figures 3.2.26-2, 4.3.1.6-1, 4.3.1.6-2, 4.3.1.6-8, and ETR 15, Figures 1.3.2.1-1, 1.3.2.1-2, 1.3.2.1-2 (sic), 1.3.2.1-4, 1.3.2.1-6, -8 and -9. The actual year-long range distribution for pronghorn antelope includes the entire Escalante Desert north of the railroad tracks from Modena to Milford. This data was presented to HDR

PAGE	PARAGRAPH	SENTENCE	COMMENT
			consultants by the Southern Regional Office of the Utah Division of Wildlife Resources but has not been used in this report. This distribution data was collected from data by biologists with up to 15 years of experience in the field of studying antelope in the West Desert of Utah. Also in the paragraph, we note that now the changes to antelope in Pine, Wah Wah, Hamblin, etc., are referred to as "highly impacted" whereas, on page 2-127 they were just "being reduced." Possibly as studies on this project continue, the actual magnitude of the impacts to antelope will be shown.
3-13	5	1	The comment that phreatophytes are a source of water loss from the Great Basin is both misleading and erroneous. Plants of this type absorb their water directly from permanent supplies in the ground, i.e., along stream banks, seeps and marshes. These areas are usually termed riparian areas and serve a very positive function which is not mentioned here. Riparian habitats in the West Desert of Utah support a rich and varied assemblage of plants and animals. Productivity of these areas is higher than any of the surrounding habitat types. These areas are very scarce and the loss or reduction of any of them would be a severe impact.
3-56	partial	1	The town Cove Fort is misspelled.

PAGE	PARAGRAPH	SENTENCE	COMMENT
3-65	2	4	The diversity of reptiles is more likely low because of the lack of diversity in niches present in the Great Basin valleys. Reptiles are not protected species in the State of Utah. Reptile species are most diverse around riparian zones for the reasons mentioned previously. Some species in these very limited habitats, such as the mountain kingsnake, are classed by Utah as sensitive species and given special protection. Snakes in the study area retreat to denning areas in the winter which is an adaption to the "low mean annual temperature" mentioned in the paragraph. The use of hibernaculums merely shortens the active or growing season for reptiles rather than limiting species diversity. Reptile dens are also protected by Utah law from disturbance or distruction.
Table 3.2.2.6-1	3.66		The mountain kingsnake is also found within the study area associated with riparian zones as is the very common western garter snake and should be added to the list of snakes. The Utah Division of Wildlife Resources has prepared comprehensive vertebrate species lists which are available and should have been used in preparing this DEIS.
Table 3.2.2.6-1			Under rodents, the genus of the porcupine is mis spelled. Under carnivores, the specific name of the grey fox is misspelled.

PAGE	PARAGRAPH	SENTENCE	COMMENT
3-68	1	1	Pheasant are probably the most popular upland game bird in Millard County but were not included, nor are any management practices or mitigation. Pheasants will be greatly impacted by the urbanization of the Delta area, increased hunting pressure and habitat loss.
3-74	4	3	It is incorrect not say that "many" peregrine falcons nest in the very eastern portion of the study area. More correctly, one could say that a very few isolated pairs do nest just outside the eastern portion of the study area. This is an incomplete list of protected reptiles, which should include the Utah mountain kingsnake, milk snake and other reptiles from the Beaver Dam Slope area.
Figure 3.2.2.6-3			An elk management (hunting) unit is located between U.S. Highway 6 and Interstate 15 in Juab County. This unit is presently hunted with a limited number of permits issued. This was not outlined. Elk also are found on the Pahvant Montains east of Fillmore in Millard County and in the Clear Creek Area of Beaver County. These areas have also not been outlined.
Figure 3.2.2.6-5			Bighorn sheep (presumed to be desert) transplant sites are only shown in Nevada and not for Utah.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Figure 3.2.2.6-6				This map, which is again hard to read with the poorly contrasting colors, fails to show Sevier Lake as a waterfowl use area. In fact, it would help considerably if large geographic features such as Sevier Lake were located on the Utah/Nevada base maps to help orient the reviewer.
Figure 3.2.2.8-2				Distribution should be greatly expanded. Roost sites are known at Black Rock Ranch and two sites are known at Greenwood.
Figure 3.2.3.6-1				The pipeline shown in this figure is only proposed and should be labeled as such. The reference in the text to this pipeline (page 3-152) also refers to a similar proposed pipeline near Ely, but it is not shown.
	3-182	3	1	Big game hunting is regulated for antelope, bighorn sheep, and cow elk on most elk units and unlimited number of buck deer tags issued.
Table 3.2.3.8-12	3-190			Mountain lion harvest data is available from the Utah Division of Wildlife Resources.
Table 3.2.3.8-15	3-198			Data is available on waterfowl in Utah. The Utah data for this table was never requested from the Utah Division of Wildlife Resources. It is easily available from 1970 through 1980. The data for 1978 is shown below:

State/ County	Ducks Harvest	Numbers Hunters	Geese Harvest	Number Hunters
Utah/				
Beaver	3,179	1,367	270	836
Iron	946	585	58	292
Juab	6,892	2,806	87	1,173
Millard	5,139	2,955	146	1,153
Tooele	3,078	1,908	9	351
Subtotal	19,234	9,621*	570	3,805
State Total	330,227	162,139	24,236	55,947

[1]Source: Utah DWR, 1981.

*This figure includes combined hunts which also got 24,978 geese.

PAGE	PARAGRAPH	SENTENCE	COMMENT
Figure 3.2.3.9-3			The current Indian Peaks Wildlife Management Area is shown as the former Indian Peaks Reservation. Former reservations are not listed on the legend and no other "former" reservation lands are listed; this is inconsistent.
3-357	2	4	The word centers is misspelled.
3-367	6	1	The statement is erroneous. A remnant herd of antelope exists in Coyote Wash (Kane County) about 12 miles from the Utah/Arizona border. The herd segment at Beryl is part of the Southwest Desert antelope herd. It is properly identified as such elsewhere in the document.
3-367	7	3	Even closer fishing opportunities than Minersville Reservoir exist at Newcastle Reservoir, Upper and Lower Enterprise Reservoirs, Baker Reservoir, the Santa Clara River and its adjacent reservoirs.

PAGE	PARAGRAPH	SENTENCE	COMMENT
3-367-369	8		While bald eagles do not nest in the Beryl OB area and no bald eagle roosts have (as yet) been identified, winter migrants use this area for hunting and numerous sitings are documented. Bald eagles using the Rush Lake roost (up to 36 this winter) very likely hunt in the Escalante Desert area. This is easily within their hunting range.
3-380	5		No mention is made of the Iron County Ambulance Service which consists of five ambulances and is manned by volunteer emergency medical technicians.
3-434	2	1	The mule deer found in the Drum and Little Drum Mountains are from a unique winter/spring migration movement of 200-300 mule deer across possibly four desert mountain ranges. Only fragmentary data exist so far on this migration pattern and further work needs to be contracted to the Utah Division of Wildlife Resources on this unique phenomenom before some large project disrupts it. The DTN shown on Figure 3.4.3.3-1 (page 3-449) appears to cross this migration corridor and could impact it.
3-434	2	1	Mule deer are even more abundant 10 miles east of Delta on the Oak Creek Mountains (Deer Herd Unit 53) and on the Pahvant Mountains (Deer Herd Units 54 and 55) southeast of Delta 30 miles. Although out of the AOA, units 53, 54 and 55

PAGE	PARAGRAPH	SENTENCE	COMMENT
			will be greatly impacted by hunter pressure.
3-434	2	3	The Gunnison Bend Reservoir and the entire Sevier River drainage is used extensively by waterfowl in the Delta area. The extensive use by waterfowl (particularly geese) has not been well documented, nor have the number of waterfowl, hunter/days or loss of habitat.
3-434	2		Not included are the elk presently found on the Tintic Range, Oak Creek Mountains and Pahvant Mountains adjacent to the Delta area and on the Beaver Mountains east of Beaver. The impact of hunting pressure and potential poaching has also not been addressed. Despite the fact that pheasant hunting is a major recreation activity in Millard County, the impacts have not been considered, nor have any mitigation been considered.
3-434	4	5	A peregrine falcon winter sighting has been reported east of Fillmore by state wildlife personnel, which confirms that this area is a winter migration corridor.
3-434	4	3	Bald eagle roost sites have been reported by state wildlife personnel at Black Rock and two separate locations at Greenwood. Bald eagle sightings have been reported throughout the Delta area with continued sightings along Utah State Route 26 from McCornick to Delta and in the Clear Lake area.

PAGE	PARAGRAPH	SENTENCE	COMMENT
3-485	1	1	There seems to be an error in the analysis assuming that the Milford OB is entirely in Beaver County. Over half of the layout area of the OB is in Iron County, with major access roads leading into Iron County and Cedar City.
3-491	4	1	The Milford OB is not just in antelope range. It sits in the middle of key habitat (as shown by the DEIS) and is an intensively managed area. A series of antelope guzzlers were constructed in the Shauntee Hills above the actual DAA community center site, and their effectiveness will be destroyed by this project.
3-491	6	1	The two bald eagle winter roosts should be mentioned as the only ones located so far. A very large roost at Rush Lake, which has up to 36 birds in it, is found only six miles southeast of the layout boundary. Also, the nearest Utah prairie dog colony is not in Pine Valley, but in the southern end of the Wah Wah Mountains, only about seven miles from the layout boundary and very close to the DTN.
3-506	4	2	While the Little Sahara Recreation Area is the nearest developed dune area, a large and recent dune area exists north of Milford along Highway 257 in the Beaver River drainage. This area is much closer to the Milford OB, and will very likely be used and impacted.

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-11	4	4	No water usage has been planned for revegetation. Wastewater production has hardly been addressed and yet it may serve as a possible water source for revegetation and wildlife habitat enhancement. The DDAs and OBs will have to have wastewater treatment plants. If lined evaporation ponds are used, they can be set up in a series so that vegetative growth can be allowed in the first ones, with the last being a strict evaporation unit. These ponds (if protected) would offer waterfowl and other wildlife habitat. This technique has been used in many other parts of the country.
4-23	1	3	Add that both the human and natural environment would be affected.
4-23	3	3	Hydraulic responses to MX withdrawals that include stream flow reductions and land subsidence are of great concern. The severity of the impact of spring flow disruption has been mentioned. Land subsidence represents another impact which could disturb unknown acreages. If water tables are reduced as on the Alton Coal Fields, the cone of depression could extend for miles and dry up a number of springs.
4-23-25			Note again the use of the term "phreatophyte vegetation." This paragraph continues with the gross misconception that in order to use all water, aquifers

PAGE	PARAGRAPH	SENTENCE	COMMENT
			should be intercepted (drilled and pumped) so that water does not run on the ground and will not be "wasted." Lending any credence to this incredible point of view is on par with discussing genocide as a means of population control. Natural ground water discharge supports riparian vegetation, which naturally supports some phreatophytic vegetation. In the West Desert, these areas are extremely rare and limited, and need protection. Interception or disruption of riparian water sources could result in the death of the associated biological communities; this should not be treated lightly. It is vital that all springs, seeps and associated riparian areas be identified so that impacts can be properly assessed. Studies should be done in good water years as well as poor ones, because some water sources disappear during low water years.
4-62	5	3	A time frame should be included; revegetation may take 30 to 100 years after the project is decomissioned.
4-94	5	2	Since revegetation is going to become such a major project, it would be very beneficial to establish a series of vegetation study plots.
4-113	1	5-6	Present antelope management in Utah has significantly assisted the population recovery of this species into much of its former range. Analyzing long-term habitat loss as only those

PAGE	PARAGRAPH	SENTENCE	COMMENT
			areas directly involved in construction where habitat is lost is inadequate for two reasons. First, the time element involved in "long-term loss" is not defined-- in fact revegetation estimates in the DEIS vary from 30 to over 100 years. The analysis that shows an eventual total recovery of antelope must include some special management considerations while vegetation is being re-established. Secondly, limiting habitat loss (and thus mitigation) to direct impacts does not adequately allow for the real impacts to wildlife populations near large projects. Indirect impacts can and will have far greater impacts to wildlife in a project of this size. ORV activity and human disturbance effects will extend up to 50 miles or more from the actual project sites to impact wildlife populations.
4-114	1	3-4	There is concern over the possible partitioning of antelope range by construction segments. If it is at all possible, this should be avoided. This raises the specter of cutting animals off from several water sources or a major forage area, which could result in major population reductions.
4-114	2		As recognized, antelope are totally dependent on key water sources. Interruption of these can become an absolute limiting factor. Once major water withdrawals start, monitoring will have to commence and alternate emergency water sources (tank trucks and troughs)

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-122	2	2	Construction of artificial water sources will be an excellent mitigation measure for lost water sources in antelope habitat but this would take weeks or months. Emergency, temporary tanks and troughs must be available to quickly substitute for water source losses.
4-122	2	2-3	Critical fawning areas need to be located as well as key habitat areas.
4-122	6		While the Beryl OB will not directly impact key antelope habitat, key antelope habitat exists just two miles northeast and will be transected by the DTN. Also, while the Table Butte key habitat area is 10 miles away, any activity in this area could cause problems because of the many wildlife fencing hazards that exist in the area. Many woven wire and 5-6 strand fences exist in the area; these are total barriers to antelope which behaviorly do not jump. Thus activities that force the antelope into this area out of a segment of their habitat may just run them into a fence which they cannot cross. Also, it should be noted that Table Butte contains a number of raptor nests including those of golden eagles and prairie falcons.
Figure 4.3.1.7-1			This figure is difficult to read because of the lack of contrasting colors used to designate different sage grouse habitat.

PAGE	PARAGRAPH	SENTENCE	COMMENT
			must be available for immediate substitution.
4-120	partial		Instead of saying..."hunting laws".....,suggest..."state wildlife regulations".... because more than just hunting regulations will be involved in wildlife law enforcement in the West Desert.
4-120	partial		1. In an area of limited water resources, it is doubtful new water sources could be developed. Guzzlers could possibly be constructed if funding is made available. 2. Because of the land patterns, it would be difficult to control ORV use. 3. To prohibit possession of high power rifles and other firearms is probably against the U.S. Constitution, especially during off-duty hours. 4. Once the area is disturbed, the area is disturbed! Revegetation may take years due to a limited rainfall. 5. At the present time, the state wildlife law enforcement section is understaffed and positions are presently open due to lack of funds. It is foolish to believe. (at the present manpower level) that the wildlife regultions can be properly enforced.
4-120	2		The antelope enhancement program in the Shauntee Hills (which included the construction of four guzzlers) will be totally disrupted by this OB being constructed.

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-151	2	3	Strongly recommend the alternative method be used to avoid disturbance of the breeding activities. The other method mentioned would definitely expose the sage grouse to unmanageable disturbances during their breeding period.
4-151	3	4	If pipelines are put into various projects, it is quite easy to construct small tripod covered wildlife ground-level drinkers at one-half to one-mile intervals along the lines. They will consume very little water yet greatly benefit the wildlife and offset other impacts.
4-161	1		Again, it should be noted that desert bighorn sheep transplants were scheduled in Utah during the 1980s for the West Desert mountains. The continuance of this program along with the MX project will require close coordination and support.
4-183	2	10	Implies that the current Utah prairie dog populations within the study area are "large populations." Nothing could be more inaccurate. All of them are quite recent transplants to old townsites, and could only be described as marginal or nuclei populations so far. Their survival is a matter of some concern to the Utah DWR and is an important part of our ongoing attempt to get eventual down-listing of this mammal.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Figure 4.3.1.9-5	4-191			The DTN shown not only passes very close to the Indian Peaks prairie dog colony site, but also through the Indian Peaks Wildlife Management Area (WMA) itself. The impression has been given in this study that environmentally sensitive areas and game preserves and unique wildlife ecosystems (page 9) would be avoided. The Indian Peaks WMA definitely qualifies as a "sensitive environmental area" (page 1-57), and a thoroughfare through the east half of it will definitely destroy its uniqueness. This WMA contains one of the few low desert elk herds in the west as well as some of the rare riparian habitat of the West Desert.
Figure 4.3.2.12-12				There are three nearly uniform green color shades used on this map; more contrasting colors would definitely aid review.
	4-657	4		Probably the greatest recreational use of the area is for hunting, wood gathering, camping and picnicking. Local camping grounds will be severely impacted.
	4-771	4	1	The word areas is misspelled.
	4-773	1		Finally, some detail on the dust control palliatives. It is implied that the palliatives may kill vegetation, pollute surface waters and seriously affect aquatic organisms. The brief and

PAGE	PARAGRAPH	SENTENCE	COMMENT
			naturally. The desert is extremely fragile with insufficient rainfall to encourage rapid natural revegetation. Halogeton and other invader plants will dominate disturbed areas if a proper revegetation program is not undertaken at the beginning phases of each construction segment.
4-776	4	5	The type(s) are not identified.
4-777	3	2	A heavy road kill of low flying raptors such as rough-legged hawks and owls will take place but was not specifically identified.
4-777	4	4	While it is true that the large transmission lines (138 KV) being considered in this project are too large in configuration to injure raptors, the smaller 25 KV lines being considered (ETR 24, page 45) are not properly designed. Raptor specifications for powerlines (see: Suggested Practices for Raptor Protection on Powerlines, 1975, Edison Electric Institute. Exhibit #1) are well known and have been used with complete success around Cedar City, Utah to modify hazardous powerlines. The 25 KV configuration shown in ETR 24 should be changed so that future expensive modifications will not have to be made on lines that electrocute raptors.

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-777	3	4	Traffic effects on all animals during operations has been understated. As long as there is traffic, however localized, animal deaths will increase over the present rates.
4-777	5	1	The potential hazards to wildlife from radar and microwave emissions have not been properly identified as to types of wildlife involved (number of animals and birds) and the types of hazards, including direct death losses and potential reproductive losses (i.e. abortions, infertility, etc.).
4-778	4	1-3	Incorrect statements concerning hunting. The number of permits are limited only to certain hunts involving antelope, elk, bighorn sheep, buffalo and moose. Unlimited numbers of permits are issued for open bull elk on most units and buck deer. Thus, an increase in demand would greatly increase hunting pressure for bull elk and deer.
4-778	4	7	The statement that "deer and game birds are the animals most likely to be shot" would hold true for much of Utah. However, antelope are the most visible animal on the West Desert and the most likely to be poached, along with mountain lions and bobcats.
4-779	3	5	There is concern that big game migration corridors might be blocked for up to two years or more and then

PAGE	PARAGRAPH	SENTENCE	COMMENT
			reopened. In the West Desert of Utah, blocking a deer or antelope migration corridor may trap the animals out in the middle of an alkali hardpan with no available water or food supply. The results would be obvious; no animals would be available to re-establish the herds afterwards. Interstate highway construction in southern Idaho and Wyoming resulted in such pile-ups of mule deer trying to get to winter range; mortality was very high until measures could be taken. Without proper planning to avoid migration corridors, similar high mortalities could result.
4-779	2	4	The lower elevation winter range for elk and mule deer is being considered as key or critical habitat. In the West Desert of Utah, winter and spring are the times when moisture is prevalent, and thus, not limiting. Winter range areas. (depending on the winter) are quite large. However, during the summer the water resources dry up and water becomes a definite limiting factor. Thus good summer range is quite small for deer and elk. This is the reverse of the normal situation in mountains, where adequate rainfall exists and agricultural or residential development limits winter range area.
4-780	Partial	1	Camping on water holes or springs may definitely cause sensitive animals like elk to move elsewhere, but in

PAGE	PARAGRAPH	SENTENCE	COMMENT
			the desert there may be nowhere else to go. Water is very limiting.
4-780	1		Upland game birds will be impacted by both increased hunting pressure and poaching. Pheasant populations in the Delta area will be impacted by the loss of habitat due to growth.
4-780	2	2	Clear Lake Waterfowl Management Area is not included, nor are the marsh areas of the Sevier River drainage system. Garrison Reservoir also has good waterfowl hunting and is not included.
4-780	4	5	Note that bobcat hides are selling for $314 here and $350 on page 4-795., para 1, sent. 6.
4-780	4		Also, sensitive areas such as fawning areas for both deer and antelope have not been identified. In addition, wildfires will probably increase due to the increase in activity, but the impacts or control of these have not been discussed.
4-795	6	1	A critical deer migration route passes through the Drum and Joy Mountains north of this OB. Special planning must be done if it is to be preserved.
4-801	2		While it may be true that human/peregrine encounters in the study area will be rare because the animal is scarce, that does not mean that the impacts would be negligible. Any negative impact to this species or

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				the spotted bat would be perceived as significant.
Figure 4.4.2-8				The bald eagle wintering area shown are very incomplete and need to be updated.
	4-808	4	1	It would be more accurate to say that no bald eagle roost sites have been identified in the area, since the presence of numerous sightings implies the roost trees.
	4-808	4	1	Also, roost trees are known at Black Rock Ranch and two sites at Greenwood. Power poles are also used as hunting perches and roost sites.
	4-808	4	3	A peregrine falcon sighting has been documented east of Fillmore by state wildlife personnel.
	4-808	4	3	The phrase that "these mountains do not appear to be particularly attractive to recreationists" is totally incorrect. Oak Creek, Chalk Creek and Corn Creek are heavily used by local residents and non-residents (particularly from California).
	4-809	4	2	The word from is misspelled.
	4-813	4	5	Management practices have not been identified to offset the increase in the recreational pressure including fishing, boating and other water-related activities. Management practices, such as an increase in stocking rates, law enforcement and facilities must be addressed. The practices and costs must be

PAGE	PARAGRAPH	SENTENCE	COMMENT
			identified and outside funding or mitigation considered.
Figure 4.4.4-2 4-821			The outline of the Indian Peaks WMA does not line up with the map underneath. It appears to be offset by up to 1.5 miles.
ETR 15			
1	3	3	The term "native species" is incorrectly used in place of the more correct form "wildlife species." Some of the game species planted in Utah were not natives to this state or country but are now part of our wildlife species.
2	1	3	After the extensive discussion in the DEIS on direct and indirect impacts to wildlife, it is a surprise to see that furbearers and nongame wildlife are only expected to be impacted in the valleys. This is an oversimplification and should be corrected to match the discussion in the DEIS.
2	2	3	The importance of water in the desert must be emphasized and the distribution of some desert species are oriented around it.
3	2	4	Since all other named animals in this paragraph have species after them, the species of Cooper's hawk (Accipiter cooperi) appears to have been left out.
4	3	5	Trend counts for the antelope population in the West Desert of Utah are available.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
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LOCAL LAND USE AND RIGHTS REVIEW TEAM

General Comments

The Land Use and Rights Review Team compliments the Air Force in its execution of an excellent DEIS regarding the proposed MX Weapon System. The deficiencies are remarkably few in number considering the complexity of the project.

The general recommendations of the team are as follows:

1. The local governmental units and citizens of the impacted areas should be consulted to the maximum practical extent in the decision making process for those decisions that can be delegated to the civilian population.

2. Whenever practical, financial mitigations should be made directly to citizens or local government so as to minimize bureaucracy.

3. A joint useage of facilities by the Air Force and the public-at-large is encouraged to the maximum practical extent.

4. Facilities necessitated by the MX project should be located so as to avoid interference with existing private uses to the maximum practical extent.

Specific Comments

The specific comments of the team in its assigned area of review are as follows:

PAGE	PARAGRAPH	SENTENCE	COMMENT
3	5		Rights-of-way requirements are low. Fill slopes must be flatter than planned to meet requirements of public safety.
17	2	1	160,000 acres of vegetation may be quite low; highway needs alone are perhaps 20,000 acres too low.
49	3		Mitigating measures should include direct financial grants to Utah for highway improvements.
52-53	1-2		Roadway systems can only be accepted for public use if they meet public safety requirements. Planned cross-sections are inadequate.

PAGE	PARAGRAPH	SENTENCE	COMMENT
			Financing for local government maintenance should be provided by Air Force.
1-12	3		Fenced areas discussed include launch shelter areas only. Surely the DAA and OB will also be fenced and guarded.
1-16	6	2	Is there a dust suppressant (palliative) of any proven life for highway use?
1-19			Shoulders and side slopes do not meet public highway requirements.
1-20	2		See comment page 1-19 if roads are available to public. Tort liability may be a problem. Also, are DTN and cluster roads to be subject to the Manual for Uniform Traffic Control Devices?
1-27	5	1	Economic and visual values should also be considered. Quite possible to co-exist at greatly reduced costs. Why not co-exist at appropriate locations? Consultation with local and state highway officials should be required.
1-29	9	3	Under what procedures and restrictions will civilian aircraft be able to use airfields? Civilian pilots do not trust military airfield personnel.
1-31			With full basing, it still appears that some form of DAA and contractor support area is required at second OB. Logistics should favor DAA at both bases.
1-32	6		If there is no DAA at the second OB, public roads may be grossly structurally,

PAGE	PARAGRAPH	SENTENCE	COMMENT
			assuming DTN is not operational prior to construction of second OB and related clusters.
1-41			Inadequate right-of-way widths and land areas for roadways.
1-44	1	5	Any portions of the MX road system expected to be available to the public should meet public road specifications at the time of construction. Does "adopted" mean transfer of ownership to local or state government?
1-49	6	3	Mention 3000 (2995) foot radius here for simplicity of reading.
1-50	3	1	DOT should say state DOT.
1-70	4	2	Does BLM still grant free use permits for material sites on public works projects? Can federal regulations be modified and simplified?
1-71	4	2	Verify land requirements; seems low.
1-72	3	5	Immediate occupancy subject to 100 percent deposit with court.
2-63	5	2	121 should be 21. Also Utah State Routes 18, 45, 100, 130 and 159 in Utah have been omitted.
2-64	6	3	DTN must be complete and operational prior to Milford OB. Construction on Utah State Routes 56, 130 and 21 all require early structural betterments.
2-109	5		Railroads may have to expand their facilities to accommodate increased demand. Also,

PAGE	PARAGRAPH	SENTENCE	COMMENT
			a significant change in the airline service may be necessary to accommodate increased traffic.
2-145	3	4-5	Some revision in federal law and BLM policy may be desireable to facilitate land exchanges and sales.
2-147	4	3	Road "improvements" should be defined. Some total reconstruction is necessary.
2-149	1	2	How can significance be addressed without considering value, use and other factors?
2-163 2-169 2-175 2-181 2-185 2-188	2 1 6 5 1 4	3 2 1 1 1 1	Not true! Existing roads in impacted area are grossly inadequate in strength, width, drainage, etc.. Total reconstruction may be required.
2-206	4	1	Highway strengths in Utah are inadequate.
3-140	5		Add Utah State Routes 18, 100, 130 and 159 in Utah. St. George and Cedar City populations exceed 10,000.
3-152	1-2		Highways need major pavement improvements. Strength of pavements is inadequate.
3-153			Utah State Routes 18, 130 and 159 not shown.
3-154			Were Utah State Routes 18, 130 and 159 considered?
3-385	2	3	Utah State Route 18 is grossly inadequate from Enterprise to St. George.
3-387	1	2	Iron County and its incorporated municipalities do not have orderly growth policies.
3-449			S-50 should be US 50.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Figure 3.4. 3.2-1				US-50 improperly shown.
	3-510	3		Beaver City is considering a reduction in street width.
	4-33	1	6	What road building techniques use less water?
	4-34	3	4	Why not use treated wastewater in road construction?
	4-84	5	4	Rewrite to allow land area to be increased only if there is evidence to support detrimental effects to MX operations.
	4-84	6	4	Expand to require Air Force to present evidence supporting detrimental effects to MX operations.
	4-94	2	1	160,000 acres is low.
	4-97	2		Halogeton. Conflicting arguments about killing it. Who is right?
	4-97	7	1	Also a good argument for maximum co-existence of DTN and public road system.
	4-329	4		Alternative needs to be developed in order to avoid improper speculation, slums, etc.. Does Air Force plan a withdrawal of public land for mitigative purposes as described?
	4-530			These mitigative strategies promote federal and state big brothership and domination. Make direct appropriations to local governmental units. Some of proposed measures are outdated or subject to elimination.

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-540			Utah State Routes 18, 130, and 159 not considered.
4-546			No I-89; also Utah State Routes 21 and 153 not identified.
4-547	1		Utah State Routes 18 and 56 need major improvements.
4-549			US-50, Utah State Route 100, etc.. Map is incorrect.
4-557			Utah roads require structural overlays.
4-580	2-4		Change "could" to "will" thereby promising return to private sector. Also, this action supports contention of public road specifications for DTN.
4-580	6	3	Change "Would have to" to "will."
4-601	2	3	Change "could" to "will."
4-606	2	4	Change "could" to "will."
4-624	1	1	Change "could" to "will."
4-631	2	3	Define or eliminate "as much as possible."
Grammatical errors observed are:			
9	2	3	Correct "lahouts" to "layouts."
2-104	5	1	Poor grammar. Subject should be redone.
2-112	5	2	Change "reinforced" to "reinforcing."
2-113	1	3	Change "reinforced" to "reinforcing."
2-127	7	1	"8" should be "7."

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	2-147	4	3	Correct "Lune" to "Lund."
	3-13	5	4	Not a sentence. Meaning is lost.
	3-218	5	4	Correct "times" to "tons."
	3-385	6	1	Correct "fuel, oil" to "fuel oil."
	3-446	2	1	Correct "Salena" to "Salina."
	3-506	3	1	Correct "Panguitah" to "Panguitch."
	4-23	1	3	Correct "effect" to "affect."
	4-273	5	3	This sentence is poorly written.
	4-303	4	3	Would be in. Add "be."
	4-571	2	1	Correct "or" to "for."
	4-572	4	3	Correct "Rockey" to "Rocky."
	4-773	6	2	Correct "gradent" to "gradient."
Deficiencies in other environmental areas are:				
Geography	14	7	2	Wheeler Peak is in Nevada. Is there also a Wheeler Peak in Texas or New Mexico?
Air Quality & Energy	15	2	5	What is state-of-the-art for solar, wind, and geothermal energy production? Is it sufficiently advanced for consideration as a mitigating measure?
Employment & Labor Force	31	8		This paragraph addresses Nevada only. What happens in Utah? Summary should state even though matter is addressed later.
Native Indians	61	1	7	Fencing may be a suitable mitigation for small isolated tracts; i.e., Parowan Gap.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Agriculture	1-73	1	1	90 days may not be adequate for agricultural land.
Industry	2-102	2		Continental Lime near Milford and Delta since no direct road to Fillmore yet. Also, Martin-Marietta is now a reality.
Aquatic Species	2-104	3	3	What is a Rynichthys osculus relicus?
Water Resources	3-15			May be well to show precipitation in inches. More common useage.
Natural Environment	3-367	7	3	Virgin River game fish?
Water Resources	4-99	2	4	Change "6 to 8" to "not more than 8."
Wildlife	4-117	4	4	Change "at new levels" to "at new lower levels."
Water Resources	4-633	1	2	This is not true; the Wasatch Mountains do not serve the impact area.
Cattle Grazing	4-636	6		Cattleguards will do the job. Maintenance should be spelled out.
Native Indians	4-680	5		This paragraph may give rise to another EIS. Why not commit now to a reasonable relocation or salvage operations as appropriate?
Native Indians	4-688	4	5	U.S. 50 is generally east-west; what is meant by east of U.S. 50?
Native Indians	4-693	1	1	Same comment as 4-680, above.
Construction Resources	4-764	6	2	Is bulking a problem for storage?
Construction Resources	4-773	2		This paragraph is a dream world. Neither the earth nor Rome were constructed without problems.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Construction Resourcs	4-775	4		Same as 4-773.

The review team appreciates the opportunity to have been of service in this project.

LOCAL HEALTH AND SOCIAL SERVICES REVIEW TEAM

General Comments

1. The first meeting of the review team failed to give team members a broad and clear picture of the MX.

2. The materials distributed to team members were extremely voluminous, yet very nonspecific in most of the areas we were asked to review. Some of our specific observations are:

   I. There were no baseline data in any of the areas we were asked to review.

   II. There were no specific impact figures for the areas we were to address.

      A. There were no numbers for health care and social service personnel required, nor formulas used to calculate personnel increases in the impacted areas.

   III. In several cases, the study fails to address, or does not fully address, important impact areas, for example:

      A. Unemployed persons hoping for MX employment arriving and driving up unemployment rates and impacting health or social services, such as; alcohol and drugs, public health, mental health, assistance payments, and hospitals.

   IV. Community-specific population impact figures appear to be understated. Also, the first graph on 4-305 and the population discussion on page 4-303 lead one to believe that the impact is not significant when in reality the graph and the discussion are skewed by Clark County. The growth in the smaller communities to be impacted will definitely be socially and economically traumatic.

   V. In the impact study, it is speculated that population growth in small impacted communities will have a positive effect socially and economically. This is in contrast to documentation of boom town experiences in other U.S. communities. The elderly, families, children, and women of boom towns have been adversely affected by rapid community growth. Also, it is speculated in the DEIS that community businesses and public services will generally enjoy the benefits of improved economies-of-scale due to population influx. Although this is true in some cases, growth rates for certain impacted communities will be so far beyond normal, that the quality of life will deteriorate. Morality and integrity will decline and the entire social system will suffer.

3. Of the four members on our team, not one was contacted and asked for assistance in development of the DEIS. Team members are not aware of any local physicians, nurses, mental health workers, hospital administrators

or other health or social service workers who were asked to provide input on baseline and impact data or mitigation.

Specific Comments

1. One-to-one contacts to gather precise data and information are needed.

2. Include heads of local businesses and public entities in planning and implementing MX-related growth. Some public and not-for-profit entities will need to develop master plans, renovate, expand, and/or add new equipment and personnel. Provide funding to assist these entities, especially with impact assessment and planning.

3. Let local businesses and public entities have a say in what new or expanded services they will provide and what will be provided by the government. A few specific examples are:

   I. Pertaining to Social Services--the levels of mental health, alcohol and drug services; assistance payments and family services. Without special planning and funding, the arrival of people needing these programs will proceed any funding to augment services to meet the higher demand. Front-end federal funding should be provided to both plan for and deliver services simultaneously with the rise in demand.

   II. The Valley View Medical Center in Cedar City has a 75-bed capacity, but only uses an average of 26 beds per day. The idle 49-bed capacity can absorb all of the anticipated local population increases expected under the Proposed Action. Also, hospitals in Beaver, Milford and Caliente can form a cooperative network with Valley View Medical Center to produce both availability and a broad range of services to MX military and civilian personnel and their families. Thus, the military will not need to construct an expensive hospital, but will be helping to improve utilization of local hospital beds, and will be preventing the fragmentation of hospital services in the area. This will allow Valley View Medical Center to become a tertiary care center in many respects.

4. Our recommendations concerning issues and topics we were asked to address are as follows:

   I. Community Health--Services such as health promotion, public health, nursing, well-baby clinics and home health care will be extremely important. By thoroughly evaluating the needs and being prepared to render adequate amounts of these services simultaneously as needs grow, serious and costly illness can be prevented. Available local funds will not be sufficient to keep pace with the needs for services during the climb in population growth. Up-front funding will be essential if a social and health crisis is to be avoided. The DEIS does not address this item.

   II. Family Health--Services such as health promotion, public health, nursing, well-baby clinics and home health care will be extremely important. By thoroughly evaluating the needs and being prepared

to render adequate amounts of these services simultaneously as needs grow, serious and costly illness can be prevented. Available local funds will not be sufficient to keep pace with the needs for services during the climb in population growth. Up-front funding will be essential if a social and health crisis is to be avoided. The DEIS does not address this item.

III. Health Facilities--Health facilities surrounding the proposed Beryl and Milford operating bases will require some renovation and modification to absorb the population influx. However, the largest of these facilities, Valley View Medical Center, has a large complement of unused beds. If this hospital were used as a referral center, with Beaver, Milford and Caliente hospitals as satellites, costly construction of new bed capacity would be minimized. Also, if Valley View Medical Center were fully utilized, economies-of-scale would allow the addition of numerous physician specialists who would be of value to both the private and military sectors.

IV. Health Personnel--Once the proposed action or an alternative has been selected, a careful projection of growth should be made by military and local officials. Then a recruitment plan can be formulated. A deliberate structuring in the recruitment of physician specialists should optimize the ultimate complement of medical services available. Thus, military and civilian residents will not need to travel to Salt Lake City or other metropolitan communities to obtain specialty care. A key area to prepare for will be nurse recruitment as there is a shortage in the area. Funding should be made available to expand Southern Utah State College and Dixie College nursing school enrollment.

V. Emergency Medical Facilities--At each operating base, an emergency medical and outpatient facility would seem logical. However, after emergency patients have been stabilized, they should be transferred to the nearest facility staffed and equipped to properly treat such patients. By consolidating such services at Valley View Medical Center, as proposed above, the broadest possible range of critical intensive care would all be under the same roof. An emergency transport system, which would likely include a helicopter, should be planned for, particularly during the construction phase when occupational injuries would be at a peak. Construction sites should have emergency medical technicians available on-site.

VI. Public Assistance

A. Information was not adequate on how public assistance was going to be applied.

B. Impact is already being felt in the Juab County area from the influx of people due to other projects, such as S. & W. Construction with the Martin Marrietta Cement Plant, the many oil companies and their d illing, Seaward Construction with the power line, and seismograph crews working in the area. These

people have different lifestyles than the people of the community. This lifestyle consists of abusing alcohol and drugs. Divorce rates are going up. This, in turn, creates many more AFDC cases. Also, the "job hopefuls" are moving into the area, of whom a large percentage are people who already are unemployed unemployables. They increase the AFDC-U cases. FSO cases increase with those families who are receiving unemployment benefits. As caseloads increase, new workers will be needed. This present increase is only a small percentage of what the MX impact would be.

C. Working with the local people involved in all phases of the Assistance Payments Administration would help to keep the sudden influx under control.

VII. Children, Youth & Family Services

A. Adequate information was not given in the DEIS.

B. Impact--Again, the influx is currently being felt. The increase number of people coming into the community have a definite impact on the youth. They are exposed to drugs, alcohol and even prostitution at a very early age, often resulting in foster placement or protective services. Children of young, divorced mothers are often neglected while the mother is out trying to find a new life for herself. Again, many new workers will be needed.

C. Close cooperation between local people and MX personnel will be needed.

VIII. Developmental Disabilities

A. Baseline Data--This area is not addressed in the DEIS. There are no figures or information as to what is now available in the way of services, facilities and staff.

The following should be addressed:

1. Current caseload of MR/DD in residential and day programs; waiting lists. Additionally known MR/DDs in population identified through EPSDT and educational systems (public and private) needing special consideration.

2. Rates of MR/DD, i.e., prevalence/incidence at birth and at later ages due to illness, accidents, deteriorative diseases, etc..

3. Current staff/personnel involved in services to MR/DD populations; facilities and programs (Training School, group homes, sheltered workshops, other residential and day programs); federal, state and local expenditures of MR/DD services.

B. Impacts--The study gives population figures for the impacted areas but does not address specifically the impacts on the developmentally disabled; i.e., projected increase in numbers, etc.. The following should be considered:

1. Increase in numbers of MR/DD population as construction/ military/other families move into Utah bringing their dependents.

2. Increased rates of MR/DD at birth due to radiation/stress/ other causes and at later ages due to occupational and other accidents, epidemics, etc..

C. Mitigation--There is no evidence in the DEIS that mitigation has even been considered. The committee recommends that the following be looked at:

1. What staff/personnel, facilities, budgets, programs and providers will be needed in future years to provide MR/DD services?

2. What new models of service delivery will be needed to provide for the larger caseloads and changes in type, severity, prognoses, etc.? Will regional training schools be needed? What legislative, adminisitrative, zoning, and other changes will be needed to implement new models of service delivery?

IX. Youth Corrections

A. Baseline Data--There is no information in the DEIS regarding detention facilities, shelter homes, group homes, juvenile court referrals, commitments to YDC, staff currently providing services, etc.. The following should be considered in any future studies:

1. Current number of youths involved in the system and annual caseload for detention, community programs (group homes, ranches, foster care, proctor advocate and other residential and day programs), secure facilities such as youth development center; probation, courts, case management, parole, and family treatment.

2. Rates of juvenile offenses resulting in apprehension, referral to court, and commitment to DSS; overlap between juvenile offender population and CYF/other target populations.

3. Current staff/personnel involved in youth corrections; facilities and programs available (waiting lists); federal, state and local expenditures for youth corrections services.

B. Impact--There is no information on what the rapid growth will do in the impacted area as far as youth corrections are concerned. What additional services will be needed, what it will do to caseloads for juvenile court, youth probation, and youth correction staff. The following information should be accumulated.

1. Temporary increase in juvenile offenses due to construction impacts. (Will the presence of construction "man-camps" bring an increase in juvenile prostitution? Will increased drug traffic reach Utah teens?).

2. Permanent increases in rates of juvenile offenses, especially serious offenses warranting secure facilities, due to larger population and due to higher occurrence among military/other new families.

3. Increased problems among existing families and resident youth due to stress and other negative impacts of boom growth created both by MX and by other projects such as IPP.

C. Mitigation--This is not addressed in the DEIS statement. There is no information as to new programs needed, additional staff needed, etc. The following should be considered:

1. What staff/personnel, facilities, budgets, programs and providers will be needed in future years to provide youth correctional services.

2. What new models of service delivery will be needed to provide for increased volume and new types of offenders--for rural detention, female programs, "tough" cases, etc.?

3. Coordination of other community programs.

X. Corrections

A. Baseline Data--The information in the DEIS is inadequate in this area. There is no mention of present programs and their adequacy; i.e., jail facilities, adult probation, state prison, rehabilitation programs, etc. The following should be taken into account:

1. Local jail population, population of prison, community correctional centers, probation and parole (misdemeanor and felony) and overcrowding.

2. Rates of occurrence of crimes and offenses, rates of reports to law enforcement agencies, arrests, court proceedings, adjudications and commitments, prison admissions and releases, parole hearings, recidivism and average length of involvement in system.

3. Current levels of services rendered by the criminal justice and correctional system including staff/personnel, facilities, provider agencies, federal/state/local expenditures for corrections, vocational and treatment programs, volunteer programs, and related programs (shelters for battered spouses, for example).

B. Impact--The DEIS does not state the impacts that the increased population will have in this area. There is no consideration of the types of people that the MX will attract to the area. We should have information available on the following:

1. Increases in crime rates, in severity of offenses and in length of involvement in the system due to increased population in general and due to a greater percent of population in high-crime-prone ages (construction, military and support populations are largely young males).

2. Increase in crime and disorder caused by drug trafficking and consumption.

3. Increase in crime due to boom conditions of fast growth with energy developments (i.e., IPP) on top of MX.

C. Mitigation--There is no plan as far as information in the DEIS for mitigating the impacts of MX on corrections in the impacted area. We feel the following should be addressed:

1. What staff/personnel, facilities, budget, programs and providers will be needed in future years to provide judicial and correctional services?

2. What new models of service delivery will be needed to meet higher volume, severity, and types of criminal justice and correctional needs of the future?

3. What legal, administrative, and other changes will be needed to deal with correctional issues in the future?

XI. Mental Health--The area of mental health was not specifically addressed at all in the DEIS. There were no baseline data, references to mental health impact or any attempt to discuss ways of mitigating the impact. In the introduction to quality of life, page 4-533, many of the potential impact problems in human services are briefly discussed. Unfortunately, the discussion does not go far enough. The discussion ends with theoretical comments rather than going on to mitigation or further "real" practical discussions. Possible mitigation should include programs for child/wife abuse, suicide hot lines, crisis programs, etc.

XII. Alcohol and Drugs--There are no baseline data suggested for alcohol and drugs. There is no attempt to discuss the impact in this critical area. It is as though this problem will not occur

in the impacted area. There is available a wealth of information, particularly out of the University of Denver Research Institute, showing the tremendous rise in alcohol and drug usage in impacted areas. The tragedy of this usage is that the use is greatest among the "old timers" or long-term residents rather than the new comers. Any discussion of mitigation is similarly avoided in this area.

XIII. Aging

A. Baseline--There are no baseline data either on the numbers of older people in the area or on the per capita income for senior citizens.

B. Impacts--The impacts have only briefly alluded to as "they will be impacted." Studies of other impacted areas indicate the aged suffer significantly more than others during impact and after. Their income is fixed, while others' income rises rapidly. The higher wages push up the cost of goods far in excess of what would have been normal. They further suffer from an inability to adopt and adjust to the many changes happening around them during impact. Their world, as they have known it throughout their lives, disappears.

C. Mitigation--Finally, there is no attempt to discuss any mitigation for the impact on this group.

LOCAL PUBLIC SAFETY REVIEW TEAM

General Comments

1. The number of law enforcement personnel estimated to be required to handle the impact of growth are very conservative. The DEIS addresses only the personnel needed to handle the population growth created by construction workers and other related growth. There are no estimates of the influx of people looking for employment but not finding any that will create a heavy burden on local law enforcement.

2. There are no data or information on where such large numbers of new law enforcement personnel would come from. There is presently a state-wide shortage of certified police officers in the State of Utah. There is no mention of the lead-time needed to train and equip new officers. Utah law requires that all Class I peace officers be certified within 18 months of their hiring date. Presently there is a two-year waiting period to get new officers into the Utah State Police Academy, which would compound the problem.

3. The condition of existing facilities now in use by local law enforcement agencies (such as office space and jails) is not mentioned. All counties involved with MX deployment in Utah are in need of upgraded or completely new jails at the present time. Millard County does not have an operational jail at this date. Any new construction of new facilities would require at least two years lead-time for planning and construction.

4. There is no mention of any change in restricted air space in Iron, Beaver, Millard and Juab Counties. This is a real concern among the sheriffs of these counties, because of the great distances from the county seats to the western borders of the counties. This requires the use of aircraft to patrol these areas.

5. The impact funding mechanism is a concern. If the funding process is handled like LEEA, HUD, FHA, or other grant or loan agencies of the federal government, the process is going to be entirely too slow to help avert many of the problems facing public safety.

6. A method of transmitting the most up-to-date information to the local agencies is needed. For some reason information is not being handed on down, thus hindering local departments in their planning.

LOCAL GEOLOGY & MINERALS REVIEW TEAM

General Comments

Much of the mountainous area is being taken up by wilderness designations as well as the proposed Great Basin National Park. This will further restrict exploration in the area.

The statements and figures concerning the Pine Grove Molybdenum Project are not correct in either the ETR or in the DEIS. The correct figures and programs for this project will be submitted to the state review committee by Getty Mineral Resources Company.

The Wah Wah-Tushar Mineral Belt in Utah and the Pioche Mineral Belt in Nevada represent a large southwest trending high potential mineralization area that encompasses generally the southern portion of the deployment area. This area needs to be left open for exploration and not occupied by MX.

Recent exploration data the mining industry has gathered is facilitating the location of drilling targets. The industry considers the pediments high potential exploration targets.

Specific Comments

PAGE	PARAGRAPH	SENTENCE	COMMENT
3	5	1-2	Throughout the DEIS there seems to be an indiscriminate interchange from nautical to statute miles. Put all figures in statute miles so the general public will understand the measurements and they will be consistent throughout.
4	1	3	From where will the steel and cement be acquired? Will the demand be so great that it will adversely affect all other construction in the area? These are questions that the DEIS does not address, yet will greatly affect the impact upon the area of procurement.
10	2	3-4	The statement is very misleading. If the aquifer has been so completely drained as to cause land subsidence, previously stated as a possi-

PAGE	PARAGRAPH	SENTENCE	COMMENT
			bility, the aquifer cannot recover but will be permanently damaged.
10	3-4		Where is the extra water going to come from in these two valleys to supply OB construction requirements? If land is taken out of use to compensate for overdrafting of water, how is the state to be compensated for this loss of tax base, not only during the construction period but after MX is gone? It is very unlikely that the land will ever be put back into production once it is removed. The state will suffer a permanent loss of tax base.
30-31			This large drain on the labor force will not only impact the area close to MX construction, but will have an impact upon the labor force throughout both states and even surrounding states. This will impact other large projects such as the IPP, the oil shale and tar sands development as well as the rapid expansion of coal mining and geothermal development. All of these are vital energy projects. They will be in direct competition for labor with the MX project. This very large demand for labor will strongly and adversely affect all other construction, such as schools, hospitals and businesses as well as any other construction throughout the area. They will be impacted by competition for labor, materials and capital.
31	2	4	The statement is completely misleading and erroneous.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				Delta is already having problems coping with the growth from IPP, and IPP construction has not even begun yet. They have the lime plant to the south, the cement plant to the north, and geothermal developments to the west. The growth rate is so fast that they are unable to set up zoning, water resources, sewage disposal, schools, hospitals, etc., at the required rate at the present time. When IPP construction gets under way, the resources for planning and construction will be taxed to the limit. If MX is placed on top of this already heavy burden, the system will be unable to cope with it.
	1-2-14			Again, the interchangeable use of nautical miles and statute miles is very confusing and leads to inconsistencies throughout the DEIS. This inconsistency should be corrected.
	1-29	2	2	"...schools built and maintained by local school boards." Who pays for the construction, maintenance and teachers? There will be no additional tax base. Will the federal government pay these costs?
	1-48-49			The definitions and requirements mentioned in this paragraph provide confusing parameters for mineral exploration. Additional clarification regarding inhabited buildings and the "allowable activities" (page 49, item 4) should be made.
Table 1.7.3-1	1-67			There is no mention of mining or minerals as key issues

PAGE	PARAGRAPH	SENTENCE	COMMENT
			sketchy references to these dust control chemicals are totally inadequate; it is hoped the subsequent EAs will specifically study the affects of these chemicals.
4-773	2	2	The word construction is misspelled.
4-774	1	1	There is a typographical error, with the words of the possibly being left out.
4-776	4	1-2	While birds of prey may only lose a little hunting area to direct construction activ-ities, construction material sites have the possibility of affecting important key habitat, such as cliff nesting sites in the foothills or valleys. The West Desert of Utah contains a large and varied population of raptors. Raptor surveys should be done for all EAs to avoid raptor nesting sites. If raptor nests must be de-stroyed, mitigation alterna-tives exist in creating new cliff sites artificially or constructing nesting plat-forms on large (138 KV) powerpoles.
4-776	4	2	Thus if the habitat loss includes raptor roost sites and nest sites, artificial structures will have to be constructed to offset the impact.
4-776	4	2	A definite planned revegeta-tion program needs to be developed before any actual construction begins. All sites disturbed must not be allowed to just revegetate

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				raised in the scoping process, nor are these listed as significant resources in Table 1.7.3-2 (pages 68-69), yet mining officials presented problems at the scoping meetings. This is one of the main industries in Nevada and Utah. It will be impacted both directly in the area of deployment and in the remaining portions of the states.
	2-24	1		How will fair compensation be determined for mineral deposits that cannot be developed by open-pit methods? How will the extent of the deposit and its ore content be determined? Does this paragraph infer that ore bodies that are mined by underground methods may be mined under the deployment area:
Section 3.2.2.4	3-52-58			Two pages of text, three tables and two maps is the total extent of the description of mining and geology in Nevada and Utah. This brief description fails to utilize the information presented in ETR 11, and does not describe the present minerals situation in the Great Basin. The maps do not present the recently discovered mineral deposits. This section needs to be rewritten and upgraded.
	3-52	3	3	This statement is very misleading. Most of the old mining was in the mountain ranges because the outcrops were easy to prospect. Present research and technology allows exploration and development beneath very deep alluvial valley-fill. There now appears to be great

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				potential for mineral exploration as well as for oil exploration in the deep valleys. It becomes even more critical that the potential for exploration not be stopped. With the deployment of MX in these valleys, further exploration will be cut off.
	3-52	3	4	This statement emphasizes the depth of the valley-fill and not the range of valley-fill. Although the statement is correct, it is very misleading.
	3-52	5		This paragraph is incorrect. The oil production in Railroad Valley; Anaconda's deep exploration for Lead, Zinc, and Copper in the Sevier Desert; and Exxon's exploration in northern Nevada for Molybdenum are all in the valleys.
	3-52	6		The emphasis placed on zeolites in this paragraph is far over done.
Figure 3.2.2.4-1	3-55			This map is not at all complete. Such large discoveries as Pine Grove in the lower Wah Wah Valley and the Anaconda discovery in the Sevier Desert are not on the map, even though mention of them is in the text.
	4-83	1	3	This sentence is in contradiction to the remaining text which addresses itself to the impacts of MX on the mining industry. Note especially the contradiction in paragraph 3, sentence 5 on the same page.
	4-83	3	5	The competition for labor will not only put most of the

PAGE	PARAGRAPH	SENTENCE	COMMENT
			marginal mining establishments out of business, but will also cause most of the larger companies to withdraw and relocate their efforts to other regions. Most mining operations have very narrow profit margins because of depressed mineral prices, therefore any increase in costs will make the operation unprofitable.
4-84	1	4	The statement on improved access in valleys is only partially true because currently access is good in the valleys.
4-86-90			Fails to develop and enumerate the impacts of MX on mineral development and exploration. The verification of numerous mining claims will take many years and is not feasible within the construction time table. A great deal of time before development of a mineral deposit is spent verifying the value and extent of the deposits. What mitigation will there be and how will the terms of compensation be determined?
4-260	1	3	The statement is completely misleading. The tremendous demand for labor and materials will have such strong impacts upon the other large projects that it may well stop such projects from taking place.
4-270	2	5-6	Sweetwater County, Wyoming with only an employment growth of 27 percent per year experienced unmanageable growth. How can Beaver County, Utah ever be expected to cope with the projected

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				growth rate of 500 percent? No where does the DEIS show how the many problems arising from such growth is to be mitigated.
	4-571	1		The Allen-Warner Valley Project now appears to be scuttled by decisions from Washington and the California backers. Where will the power now come from for the operating base? Does this put the MX in direct competition with all the other development in the area?
ETR 11				
	9	4	1	Development of mines takes five to ten years not two to five years as stated.
	10	partial		Pediments are mineralization belts and can be mined. This is stated here and in Chapter III, page 3.52, but impacts to this area are only superficially addressed. Later on page 50, it states that most metallic mineral resources are located in the mountain ranges not in the valleys. This is a contradiction.
	22	2	2	Reports extensive exploration activity because of mineralization and ease of access. This is not mentioned in either the Affected Environment or Environmental Consequences DEIS chapters. In fact on page 4-84, it states that access would be improved by the road system constructed for MX deployment. This is a contradiction and not true.

PAGE	PARAGRAPH	SENTENCE	COMMENT
			Presently 100-200 mining companies are engaged in exploration activities in the Great Basin. Reno and Salt Lake City are the area headquarters for these companies.
50	2	2	Correctly states mine development takes up to 10 years. Yet on page 47, it states that for mining industry to take advantage of MX labor force the deposit would need to be discovered in the next two years and be ready for development during the MX construction or immediately following. This situation is not possible because the competition for labor during MX construction would preclude mineral development. This is stated on page 54. Many of the large companies have stated that the inflated costs and labor competition with MX would drive them from the Great Basin. Mines pay taxes and MX will not. This period of no mineral development would be 10 years and comes at a critical time when exploration and development is gaining momentum. The mining industry is just beginning to discover the deeper deposits in this area and it is going to require time and resources to extensively explore. Table 3.3.3-1 depicts MX potential for attracting labor from mining ventures. The text does not elaborate on the fact that most of exploration work force is nonunion. This situation would favor project-jumping by labor, debilitating many exploration efforts.

LOCAL ENERGY AND NONRENEWABLE RESOURCES REVIEW TEAM

General Comments

A lot of valuable information has been put together on the impacts of MX on energy in southwestern Utah; in many cases it is general in nature, when it should be specific. It is also hard in the DEIS to separate renewable and nonrenewable resources. As a general statement, the DEIS would be a better product if the Air Force had used more local firms in its development. In many ways it is very impersonal.

The following problem areas should receive much more extensive documentation:

1. The assumption that gas lines will be built.
2. The assumption that transmission lines and gas lines will not be stalled by environmental considerations, right-of-way acquisition, etc.. The DEIS assumes that lines will follow existing roads without mitigation of visual pollution.
3. The assumption that fuel allocations to the area will be adjusted--what will that do to the regional supplies.
4. Many statements are merely speculative, wishful thinking concerning coordination between local officials, developers, utility companies, etc..
5. Spinoffs of energy research having national benefits are not quantified.
6. Pollution is not quantified.
7. Wind and solar conditions are not quantified.
8. Relationships with other development in the region neglected.

Specific Comments

PAGE	PARAGRAPH	SENTENCE	COMMENT
4-561	2		The Energy Petroleum Allocation Act of 1973 sets up allocation guidelines for impacted areas. Does this protect the baseline use: supply and demand and pricing?
4-562	1	2	The assumption that workers will move from harsher climates is speculation and in many cases the local climate would be harsher than their own.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	4-562	1	3	What is to guarantee that energy conservation features would be used by buildings not directly related to construction or operation of MX?
	4-562	1		The first cost of installing of alternative energy sources (photo-voltaics, etc.) was not stated.
	4-562	1		Inadequate solar and wind data. (Cedar City, for instance, is considered unsuitable for wind power due to highly variable winds.)
Figure 4.3.2.10-2	4-565			Map does not distinguish between existing and proposed transmission lines.
	4-566	1	3	Harry Allen Power Plant has been scrapped.
	4-566	1	4	DEIS assumes timely coordination of power plant construction. Construction time tables are typically inaccurate.
	4-566	1	5	Solutions to problems of rerouting transmission lines are not adequately addressed.
	4-566	2	1	Alternative energy improving the regional energy supplies is speculation.
	4-566	2	4	Why are concerns of spills, explosions and air pollution considered minor?
	4-566	2	5	Perhaps fuel lines through the DDA would not be extensive, but main lines (such as the line paralleling I-15) would have significant impacts.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	4-566	2		How would impacts of lines through pristine areas be mitigated?
Figure 4.3.2.10-3				Does not distinguish between existing and proposed pipelines.
	4-570	3	1	What are impacts on the nation as a whole?
	4-570	4		How can conformance by private individuals be measured, especially with already overworked inspectors. Coordination with local utilities is assumed (how?).
	4-571	5	1	How can pipeline construction keep up with growth, with labor and material shortages eminent?
	4-571	6	2	Can the Air Force speak for Utah Power & Light?
	4-572	1		Cumulative effects of IPP and Alternative 2 on Delta are not addressed.
	4-576	2	2	Why would air pollution from fuel burning be a problem in Texas/New Mexico and not in Utah/Nevada?
	4-576	6		Contradiction between paragraph 6 and 2. In one case air pollution is expected to result and in the other it is not expected to be significant.
	5-150-151			Index has several errors, namely references to non-existent sections. For instance: Electricity: 4.2.5.2.8

PAGE	PARAGRAPH	SENTENCE	COMMENT

Energy:

2.5.26	2.8.25	3.2.1.2
2.6.25	2.9.25	3.3.2.4
2.7.25	2.11.26	3.4.1.2.11

LOCAL AGRICULTURE REVIEW TEAM

General Comments

The overall assessment of impacts to agriculture by construction of the MX system gives the impression that there will be insignificant effects regardless of whether the MOB is located at Coyote Springs, Beryl, Milford or Delta. This impression is inaccurate. Removing 2000 acres of farmland and/or 160,000 acres of grazing land has a domino effect on the whole area; this will not be offset by the money coming in for MX construction. Laborers on MX are not going to pay the bank loans used to buy cattle, or machinery or deep well pumping systems. Likewise, a cattleman deprived of his range rights in 1982 cannot survive for 10 to 12 years waiting for his range to be returned to public use.

Land that is presently farmed and that then lays idle due to diversion of water rights to MX does not remain static. Noxious weeds spring up, wind, water, etc. erodes topsoils and destroys plant nutrients; it will take years to restore the land to its former productive state.

General Comments

1. One serious effect of building the MX system in Utah and Nevada would be the further decline in the already short labor supply. That could cause the elimination of some ranch and farm operations.

2. Future regional inflation caused by MX would multiply the problems of the agricultural enterprises in the area. In the Wyoming coal and oil development areas, the cost of living is 30 percent higher than other places not affected.

3. Competition for agricultural land for development causes inflated land prices. This prohibits the purchase of land to increase the size of farm and ranch units. Most units need to be increased in size to make them economical.

4. Taking 2000 acres of farmland out of production in the Milford area would decrease alfalfa hay and corn silage production. This decrease in forage production could decrease the dairy and beef industry in the area, and would affect the economy of the area. Agricultural production is a renewable resource that can continue indefinitely, whereas the MX will be discontinued after a period of years.

5. Beef and dairy production has a multiplier affect of about four, so any decrease in production would greatly effect the local economy.

6. It is stated that overgrazing is taking place on the range lands in the area (page 17). Some overgrazing has taken place in the past, but severe cuts have been made on most ranges in the area. Most ranges are improving at the present time.

7. General McCarthy has publicly stated on several occasions that five acres per shelter would be effected, yet the DEIS states (page 17) that 160,000

acres of vegetation will initially be removed. 4,600 shelters x 5 acres = 23,000 acres; 160,000 acres - 23,000 = 137,000 acres 4,600 shelters = 29.78 acres per shelter, not five acres per shelter. Why this great discrepancy?

8. Water

   I. Ground water

      A. Any use of ground water by the MX project will result in the lowering of the ground water table.

      B. Use of ground water will result in the removal of some land from agricultural use. The exact acreage is difficult to determine.

      C. Trucking water is not practical and it would still require water.

      D. Even the temporary removal of land from agricultural use is damaging to the soil. This is especially true when soil has adverse salt conditions. Any removal of land from agricultural use should be only a last resort.

      E. Any lowering of the ground water table will increase the costs of pumping water. This will be a problem for the agricultural producer.

      F. It is stated that continued removal of ground water sources will very likely damage water quality (pages 2-121 and 4-23). This is later contradicted (page 4-774) where it states "no significant impacts on groundwater quality is expected."

   II. Surface water

      A. The total amount of available surface water is currently being utilized, except on occasion when some water is released when storage facilities are at capacity. This is not a yearly occurrence and therefore cannot be relied on.

      B. Approximately 8000 acres of farmland will be removed from production in the Delta area due to the construction of the Intermountain Power Project. This amount is a significant proportion to the total number of acres.

9. Reduction of irrigated acreage

   I. Both the Delta and Milford areas could lose 2000 acres. This amount is significant and should only be a last resort.

   II. The Delta area will lose 8000 acres due to IPP.

   III. Table 3.2.3.8-2 (page 3-170) is in error; there already is a serious reduction in the irrigated acres in Utah. Trend needs to be changed.

10. Agriculture labor force

I. Securing qualified agricultural employees is difficult at best. Increased construction in the Delta area will result in a serious reduction of the already critically low labor force. MX construction will result in serious problems because of the differences between agriculture and construction salaries. This will result in decreasing the availability of qualified agricultural laborers.

11. Loss of AUMs

I. Restoration of all grazing areas to preconstruction levels is important.

II. Alternative grazing areas need to be made available during the construction period.

12. Private land

I. There should be no direct impacts on private land for the Nevada/ Utah deployment alternative but there could be indirect impacts.

II. All locations would have dramatic increases in land prices due to MX construction. This will result in a sharp increase in agricultural land prices as well. This action will deter acquisition of land for agricultural use.

13. Impacts to native vegetation

I. Any disturbance of the native vegetation most probably will result in an increase of certain weedly species. The most important potential weed problem is halogeton. This weed is difficult to control and is dangerous to livestock. It may be difficult to reestablish vegetation.

II. Revegetation is expensive. Also, in some cases up to a century or more. This problem will also affect grazing rights.

III. Loss of vegetation will increase soil erosion.

Most of the estimates of agriculture losses are conservative. MX construction will adversely affect the agricultural industry in Utah unless a complete comprehensive planning program is utilized. Planning for these problems should start immediately to minimize the impacts of MX on agriculture. It may be possible to develop adequate programs if the work is started now.

14. Revegetation

I. Irrigation will be required on areas where precipitation is less than eight inches--this is 80 percent of the deployment area. The lower, warmer valleys will require additional irrigation to overcome evapotranspiration. This is an additional drain on the ground water source. Generally these warmer valleys have the lowest amount of water yield. This is not addressed in the DEIS

(pages 4-23-26).

II. One mitigation measure offered in the DEIS is to reduce water use through elimination of irrigation for revegetation (page 4-33, para. 1). This is in direct contradiction to the requirements for revegetation of disturbed areas.

Specific Comments

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Section 2.3.1	2-115-121			Ground water requirements for Coyote Springs indicates a significant adverse impact on agricultural use, which is further amplified on pages 153-154. Stopping the development of a 70,000 acre agricultural program that is essential to the sustenance of a Native American culture is critical.
	2-121	6	3-4	Removal of 2000 acres of irrigated farmland by buying existing water rights--"additional impacts would be possible." This is an understatement. Over the past 20 years, this valley has been a developing farm economy that includes the purchase of expensive farm machinery, upgrading farm production and an increase in dairy operations (not only in Utah but for Nevada and California as well). The removal of land producing 7 to 10 tons of alfalfa or 25 to 30 tons of corn would certainly have an impact on the industry.
	2-126	1	1	7500 acres of native vegetation would be removed. Much of this is edible forage for cattle.
	2-126	4	1	Removal of 5500 acres of native vegetations certainly does create a permanent major impact.

PAGE	PARAGRAPH	SENTENCE	COMMENT
2-134	4-5		An estimated 30,000 direct jobs plus an additional 22,000 to 30,000 indirect jobs would create an imbalanced labor market that would compete for all of the available agricultural employees, and drive wages to prohibitive levels.
17	1	2	The reference made to overgrazing implying it is a continuous condition is not true. Overgrazing did occur years ago, but public lands are being restored to a carrying capacity in many areas that is greater than existing prior to overgrazing. In addition, the reference to the loss of specific AUMs on the public lands as not being significant to the overall grazing program does not consider the impacts on those individuals who are unfortunate enough to have an allotment within the OB site. Due to the vastness of the desert and the limited amount of water for livestock, little damage would occur to the grazing of public lands. We do feel that because water has always been the determining factor in the development of agriculture in Utah and Nevada, that diversion of present usage will hurt agriculture on a permanent basis.

LOCAL ENVIRONMENTAL HEALTH REVIEW TEAM

General Comments

It should be noted that upon review of the environmental health sections of the MX DEIS these particular sections were dealt with lightly or not at all. Therefore, the following review statements are general, but should be elaborated on, in full, prior to any initiation of construction for MX. It is felt that these issues are of great concern and should be dealt with fully.

Specific Comments

1. The sections of the MX DEIS dealing with air quality appear to deal mainly with the temporary air quality effects during the construction phase; they do not effectively address the long-term effects to air degradation after completion of the total project. The following categories were not effectively dealt with in the DEIS and should have further consideration in the FEIS:

    I. When construction of the operating and support bases is complete, what total impact will be imparted to overall air quality, i.e.:

        A. Total increase in emissions due to increased vehicular traffic on and off-base due to increased population.

        B. Affects of emissions due to increased air traffic.

        C. Facilities on-base that will possibly affect air quality.

            1. Will heat facilities on-base be coal, gas, oil, or electric; and what will be the affects on air quality?

            2. Will there be any incineration facilities on base?

        D. Will there be any methods used in the assembly and construction areas that would cause any appreciable affects on air quality?

        E. What affects and in what quantity will emission from rocket firing test facilities have on air quality?

        F. When construction of gravel and dirt roads is completed in the deployment area, are there effective chemicals or other means available to control fugitive dust caused by inherent weather conditions? If available, will these controls be initiated?

2. The MX DEIS does not respond to the potential for increased noise pollution in areas adjacent to the operating and support bases. Some areas that need consideration in the FEIS are:

    I. By what amount will noise pollution be increased by air traffic in vicinity of the air strips?

II. What amount of noise pollution will be generated by test firing rocket engines in association wtih the OBTS?

III. What affect will the increased noise pollution have on the well-being of individuals in surrounding populations?

3. It has been noted in the MX DEIS that many communities within the MX impact area will receive significant population increases. The DEIS failed to comment on the impacts to existing water supplies for those affected communiites. Areas that should be addressed in the FEIS are:

I. Do those communities that will receive significant increases in population have existing water systems capable of delivering an adequate amount of water to the increased number of culinary connections that will be attendant with population growth?

II. Will those communiites not having adequate water systems to serve the increased population have the capability to acquire additional water rights and physical facilities to meet the increased water demand?

4. With the advent of MX, those communities experiencing additional population growth could also experience problems with handling the additional amounts of wastewater generated by the increased populations. Some points which should be addressed in the FEIS are:

I. What type of sewage facilities are available to those communities that will be affected?

II. Are those facilities capable of adequately handling the increased wastewater?

III. Are there any inherent problems with the existing facilities?

IV. If present systems are not capable of handling increased amounts of sewage, do those communities have resources available for expansion of their present sewage system? Are there feasible alternatives?

5. The MX DEIS indicates isolated construction camps will be built during the initial phase of MX. The DEIS failed to address those questions dealing with environmental health and sanitation at the construction camps. Areas that need to be addressed in the FEIS are:

I. Will the construction camp have a chemically and bacteriologically suitable supply of potable water? How will the water be supplied?

II. What means of wastewater disposal will be employed? Are soil conditions suitable for underground wastewater disposal?

III. What standards will be met for housing workmen?

IV. How will solid waste generated by work camps be properly disposed of?

V. What type of food service facility will be at the construction camps to insure safe, quality meals for the laborers.

VI. What type and quantity of sanitary facilities will be provided for employees, e.g., toilets, showers, lavatories, etc.?

6. During and after construction of the MX, additional pressure will be incurred at present recreation facilities. Environmental health issues that should be addressed in the FEIS are:

I. Are sanitary facilities (restrooms) at present developed recreation sites adequate to handle the increased visitor use?

II. Are the culinary water supplies capable of supporting an increase in visitors?

III. Is the wastewater system adequate to handle increased demands?

IV. Is there suitable means of handling the additional solid waste generated by increased use of the present established facilities?

7. Although hazardous waste was covered by the MX DEIS, there are certain specific areas that should be covered in the FEIS:

I. What specific hazardous wastes will be generated?

II. Will presently established hazardous waste sites be utilized?

III. Will additional sites be established for disposal of hazardous wastes?

IV. What precautions will be established to insure against accidents or spills involving hazardous wastes?

8. The extent to which the MX DEIS has dealt with solid waste appears to be inadequate to address the problems of solid waste management. The DEIS appears to deal only with those facilities which are presently in use by those affected counties and communities. Some pertinent categories to be addressed in the FEIS are:

I. Will present established landfills be capable of handling the increased solid waste volumes?

II. Will the increased amount of solid waste shorten the life of present landfill sites?

III. Is additional public or private land readily available to counties or cities to expand landfill sites if necessary?

IV. Is the equipment presently in use at landfill sites adequate to handle the increased burden?

V. Will the proposed operating and support bases develop their own landfills or use existing facilities?

VI. Will those communities or counties not oeprating landfills have the means to obtain land and provide for proper disposal of solid waste?

VII. What increased amount of solid waste is projected?

9. The MX DEIS did not appear to adequately address industrial hygiene. All phases of industrial hygiene that could have any detrimental effects on civilian workers and military personnel should be addressed in the FEIS.

10. The MX DEIS deals mainly with temporary water pollution problems but does not effectively deal with long-term affects after construction has been completed. Areas that should be addressed in the FEIS are:

I. Will any new wastewater treatment facilities be constructed which will discharge to any surface waters?

II. Will there be any appreciable effects by runoff from disturbed land surfaces, such as roads, to surface waters.

III. What are the potentials for contaminations of underground aquifers from increased use of underground wastewater disposal systems.

11. The MX DEIS did not cover many concerns and areas that will impact any of the local and state agencies located wtihin the MX impact area. With increased temporary and permanent population, local and state health agencies' workloads are going to be drastically increased. Areas of concern that should be addressed in the FEIS are:

I. All areas of environmental health services will increase with the advent of MX (e.g., hotel, motel sanitation, swimming pools, increased land development such as trailer courts and subdivisions, new food service facilities, etc.) Are present agencies adequately staffed to handle increased work loads?

II. Do local and state health agencies have the capabilities to increase staff and facilities to accommodate increased work loads.

III. Will assistance be available to help alleviate the burden on local governmental agencies.

LOCAL WATER RESOURCES REVIEW TEAM

General Comments

State water laws will protect existing water right owners if followed. Recommend transporting water from nondeveloped areas to the Milford OB. Legislative authorization must recognize unanticipated impacts and provide a process for payment of impact mitigation monies without long delays for reimbursement. Technology is not available to evaluate all of the impacts from water development without pumping data. This makes development and impacts conjunctive. Evaluation of impacts must be provided as development takes place.

Specific Comments

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Table 2.2-5				Total water required may be low.
	2-100	7		Utah has closed ground water basins which require exchange-in-use, not the additional demand on basins.
	2-101	partial	1	Add Holt Mine being developed by Ranchers Exploration. The Holt Mine has excess water which may be available for exchange purposes.
	2-101	3		Permanent stream flows are allocated, however, intermittent flows and water harvesting may be developed without adverse impacts to existing rights.
	2-115	4		Exchange of water rights would not lower ground water levels. Escalante Valley has areas such as Lund with high ground water levels.
	2-121	6	3	2,000 acres of land is high if 5,000 acre-feet is required for base. Present allocation is 4 acre-feet per acre per year.
	2-122	1		The area is located in alluvial-fill valleys which nature has constructed over

PAGE	PARAGRAPH	SENTENCE	COMMENT
			many years. The impact of man will be minor with the low precipitation which occurs. Erosion impacts will be low due to limited runoff.
2-122	4		Ranking is based on state legal process or on impact to water resource only.
2-159	2 - 3		See comment p. 2-122 para. 4.
2-189	2	5	Five percent impact on ground water is approximately same as on Beryl or Milford, since demand is approximately five percent of present use. Beryl/Milford is rated high impact while Dalhart is rated low.

LOCAL MANPOWER & EMPLOYMENT REVIEW TEAM

Specific Comments

1. Direct and Indirect Employment

Section 2.3.14 (pages 2-134-136) states that the peak direct MX employment will be 30,000 and the indirect employment will be 22,000-30,000. These figures are not consistent with the three alternative employment estimates identified in Chapter 1 (Errata Sheet No. 3). The highest of the three alternatives shows a peak direct MX employment of 22,228.

The multiplier, which was apparently used to compute indirect employment resulting from both the construction phase and the operation phase, was apparently less than 1, as reflected in the following figures taken from this section.

	Direct	Indirect
1987 peak construction	30,000	22,000-30,000
1991 operations	13,200	6,000

The multiplier used seems low--Job Service would normally use a multiplier between one and three, depending on whether the work force was temporary or permanent--plus other factors.

In regard to employment demand in the region of impact, the DEIS simply states that "shortages of workers would become acute." The review team feels that more work should be done to assess the serious competitive effects of MX-drawing employees from local employers who cannot compete with the higher paying jobs.

2. Baseline

Section 3.2.1.2 (pages 3-5-9) indicates that Baseline 2 includes prospective developments in Beaver County, but does not include any developments in Iron County (specifically Rancher's Exploration). This is a silver mine which currently employs approximately 40 workers and plans to employ 80-100 people by 1982.

There is an inconsistency between Sections 3.2.1 and 3.4.5 regarding the number of employees projected for the Pine Grove Molybdenum Project. Section 3.2.1 states that the molybdenum project will have a sustained employment level of 1,000 persons during operations. Section 3.4.5 states that the project will increase to 700 in 1984 and level-off.

Table 3.2.1. 2-2 and Baseline 2 (pages 3-6 and 3-10) show the Martin Marietta Cement Plant located in Millard County. The plant is actually located in Juab County.

3. Methodology for Disaggregating the Employment

The methodology for distributing the civilian employment (ETR 27) at either a Milford or Delta operating base does not appear sound. The committee feels that less than 90 percent of the civilian work force will

live in Millard or Beaver Counties should one of those sites be chosen for an operating base.

4. Unemployment Rate

ETR 27 projects a constant baseline employment rate for each county wtihin the region of impact from 1982-1994. Unemployment rates tend to be cyclical in nature, but this was not taken into consideration.

5. Projection of Employment by Occupation

The DEIS projects total direct and indirect jobs (ETR 27), but does not include any information related to projection of jobs by occupational classification. Occupational classification data is important in assessing the impacts on existing businesses, the local labor pool and vocational programs provided in the local schools and colleges. More effort should be made to increase the level of detail in this area.

6. Population and Employment

The DEIS lists 30,000 jobs at peak, with a maximum population growth of 85,000. This is a 2.81/1 job-to-population multiplication factor, a low ratio. Most common multiplication factor is five, with some members of industry using seven. Using five means a population of at least 150,000.

Beaver County presently has 1,600 persons employed. Growth is projected to 4,600 jobs in 12 years. Mining would supply 1,800 new jobs (of the 4,600). This would more than double Beaver County's population by 1992.

The competition for labor and the cost of inflation will greatly inhibit or stop mine development. Mine developments are based on economic feasibility; stability of the economy is needed for planning.

LOCAL RAPID, LARGE-SCALE GROWTH REVIEW TEAM

General Comments

The following comments summarize the discussions engaged in by those members of the review team that convened at Brian Head on February 26 and/or 27 to analyze the large-scale, rapid growth portion of the DEIS. Several team members were unable to attend the Brian Head workshop and will submit individual responses.

The consensus of those team members who were able to meet together was that: 1) the DEIS document does adequately identify the important issues relating to large-scale, rapid growth, but 2) the actual analysis of the subject matter is disappointingly superficial and inadequate.

The premise upon which the group based its evaluation was that the study should provide local and regional decision makers with sufficient data to enable them to make timely and informed decisions concerning the impact upon their communities of deployment of the MX system as proposed in the DEIS.

The Air Force justifies the lack of specificity by suggesting that detailed, site-specific data will be made available at a future date in accordance with their "tiering" process.

For those communities which will be impacted by MX construction and maintenance, time is of the essence and review team members felt that the DEIS should contain the type of information necessary for planning purposes.

The review team recognizes that the subject matter which it was assigned to review is broad in scope and that other review teams are focusing on specific issues which are subcategories of large-scale, rapid growth. With this in mind, the following comments will address basic areas of concern.

Comments on the Adequacy of the DEIS

1. The major categories for analysis have been identified, but the actual in-depth analysis of the issues is seriously lacking in detail. A number of vital concerns, e.g., competition for labor and materials, financing MX-related impacts, quality of life, construction worker commuting patterns, etc., are inadequately covered. Additional specific examples are included in the body of our report.

   Unfortunately, the emphasis of the DEIS appears to address natural environment issues rather than human environment concerns. The subjects of native vegetation, pronghorn antelope, bighorn sheep, desert tortoise, etc., are carefully scrutinized, whereas the analysis of community impact and other socioeconomic issues are addressed in aggregate form only.

2. The baseline data were felt to be generally adequate. The quality of the information, however, could have been improved in many instances if primary, rather than secondary sources had been used.

3. The DEIS does not provide sufficient detail to quantitatively predict impacts. The data were particularly weak in the following categories: 1) base design, 2) construction campsites, 3) housing needs, 4) labor requirements and 5) income levels.

The degree of impact experienced by a community will be significantly influenced by the following details which were not addressed:

I. Base design

A. Housing capacity

B. Commissary

C. Entertainment facilities

II. Construction campsites

A. Number of camps

B. Location of camps

C. Size of camps

D. Timing of construction

III. Housing needs

A. Temporary versus permanent

B. Mobile homes

C. Trailers

D. Apartments

E. Motels

F. Single-family units

IV. Labor requirements

A. Breakdown by trade

B. Marital status

C. Age

D. Sex

E. Family size

F. Educational level

V. Income levels

A. Average wage

B. Income level by trade

C. Construction versus operations income

This degree of specificity is necessary to enable local decision makers to plan for the future.

4. A major reservation expressed by the review team concerning the impact analysis portion of the DEIS stems from the fact that little local input was obtained. In determining the degree and seriousness of the impact, it is necessary to understand the local perspective. Without this input, the assumptions presented in the DEIS could be challenged.

   The review team was not comfortable with the relatively small impact zones. The analysis of the Delta base alternative, for example, indicated that there would be no long-term impact on Juab County. This conclusion is highly suspect.

   The DEIS inadequately addresses the impacts associated with: 1) social change, 2) competition for labor, 3) competition for capital and materials and 4) changes in the region's economic structure.

5. The mitigation options are presented in very general terms and, consequently, are difficult to evaluate. The options appear to be appropriate, but lack sufficient detail to determine if the implementation would protect local interests.

   A response concerning the "Quality of Life" in the impacted communities is attached. There is a lack of responsiveness in the DEIS to the needs of the local people regarding the cultural arts.

   A noticeable element absent in the impact mitigation options is any reference to the timing of the financial and technical assistance.

Inadequacies That Need To Be Corrected

Employment

The FEIS should identify the labor pool source(s) from which the MX project would draw. This is necessary in order to assess the availability of such labor. The FEIS should also improve the limited analysis that has been done on the cumulative effects of having a number of major construction projects in the same region in the same time frame. Projects such as Allen-Warner Valley power project (southern Utah and Nevada), Intermountain Power Project, central Utah coal development, synfuels development, etc., would be likely to overlap with the MX project, and the analysis which has been performed thus far is inadequate to assess the impacts of all such projects competing for limited supplies of labor and material within the region.

Earnings

As with employment, the analysis of impacts to income needs to be upgraded. First, the information presented in the DEIS is inadequate for the reader to assess, even at a generic level, how much wage-price inflation could be reasonably expected to be incurred by the region. Better quantification is needed in this area; it is not sufficient to say (as on page 4-288, paragraph 1), ". . . is likely to trigger localized wage and price inflation. . . ." An indication of how much inflation is what is needed.

Second, with the likelihood of numerous other major projects bidding for the same labor, there is likely to be an even higher rate of inflation in labor costs than would otherwise have been the case. This likelihood has received no attention in the DEIS and the oversight should be corrected in the FEIS and subsequent site specific environmental assessments.

Public Finance

The analysis under Public Finance (Section 4.3.2.5, pages 4-399-358) seems to be unnecessarily vague. Since the term "public finance" actually covers a very broad set of programs, expenditures, and income source, each of which can be affected differently by rapid growth in the region, it is without merit to simply list, as in Table 4.3.2.5-1, the net fiscal effects of MX deployment. A more specific ledger sheet type of analysis which would show which programs would be most severely affected would be of much greater service. The sheet could be patterned after the one presented in Table 3.4.1.3-6 and could still show the net fiscal effects.

Population

With the availability of the preliminary 1980 Census data, the population estimates should be thoroughly reviewed and revised where warranted. Econometric models which are driven by population levels and trends should be examined, and where there are significant differences between the figures previously used and the current census figures, the model should be recalibrated and run again.

Infrastructure

Treatment of community infrastructure in Chapter III seems to be adequate, but the analysis of impact in Chapter IV is incomplete. While Chapter III outlined such infrastructural elements as education, health care, police protection, fire protection, water supply, wastewater, and solid waste, Chapter IV seems to be almost wholly preoccupied with impacts to education, with little or no meaningful treatment of the other six categories. It would probably be much more proficient to combine this section with the Public Finance section and treat them jointly. The paucity of the analysis of infrastructural elements other than education should, in any case, be rectified.

In addition to the above, there is virtually no treatment of the private side of community infrastructure. Since a community's infrastructural character is actually a blend of the public and private sectors, equal treatment should be given to these regions' business communities and their interaction with the public sector.

Quality of Life Comments

In reading through the "Quality of Life" references in the DEIS there is a lack of response to the needs of the local people in terms of the cultural arts. Several Utah towns stated a desire for greater cultural refinement opportunities and a protection of their "way of life." Utah as a whole, highly esteems the arts and is a recognized leader in the field throughout the country. There is a concern that rapid, large-scale growth will cause deterioration of cultural values.

Those who have chosen to live in small, rural Utah towns have often done so at the expense of higher paying jobs and career opportunities offered elsewhere. They are eager to protect their quality of life.

I am from out-of-state and am not LDS, and therefore can observe more objectively the religious attitudes of small-town Utah natives. Historically, Utah became their home as a refuge from religious persecution. Though they accept the presence of other religious groups, the rural LDS towns want to preserve the church dominance and consequent community social structure. The threat of this basic concept of their "way of life" is probably the underlying reason for the opposition to the proposed MX basing in Utah.

The DEIS states repeatedly that the MX system will have a devastating impact on the population of towns, such as Delta, Milford, Beaver and others, yet no amelioration is offered. In addition, the DEIS states that little impact would be felt by populated areas of the Nevada, New Mexico and Texas site alternatives.

Realizing the vital importance of safety, housing, education, etc., we nevertheless cannot forget to feed our souls. The quality of life we strive to protect goes beyond the essentials of survival. Therefore, I respectfully submit the following ideas for discussion in this group.

1. Possible funding support for local arts efforts during population growth periods. This becomes even more urgent with the federal cuts to the National Endowment for the Arts--the traditional source of arts funding.

2. Provision of facilities for visual and performing arts, perhaps on a temporary basis, such as with modular classrooms.

3. Giving heavier weight to the importance of the impact of MX basing to the life style of Utahns, and thereby consideration of alternate sites.

Baseline Conditions

Baseline data (existing conditions) was derived primarily from secondary sources, including local planning documents (e.g., community four county master plans; Association of Governments planning documents) and various publications of state and federal agencies (e.g., Utah State Planning Coordinator's Office; Bureau of Economic and Business Research, University of Utah; Federal Bureau of Economic Analysis; U.S. Bureau of the Census).

Due to the almost exclusive reliance on secondary sources, the data was somewhat outdated in some instances. As examples: data regarding fire protection

in Beaver County is based on a 1976 "Planning for Growth in Beaver County" document, and thus does not show that Beaver County has been organized into two fire districts (ETR 33, page 1-39); revenue and expenditure data for the Beaver County School District is derived from the 1977-78 Annual Report of the State Superintendent (ETR 33, pages 1-11 and 1-12). More current data could have been provided by local officials if they had been contacted by those preparing the DEIS. Nevertheless, the analysis of current conditions is generally adequate in providing a basis for analyzing the impacts of MX deployment.

Baseline projections of population to the year 1994 were developed by the University of Utah, Bureau of Economic and Business Research. Two baselines were used: 1) a trend-growth baseline, and 2) a baseline with adjustments for several large projects with "significant probability of occurrence" in the study region (ETR 27, page 114). Both baselines are used as a basis for projecting total employment and labor force immigration impacts of MX deployment and impacts on population immigration (DEIS Chapter IV Part II). The employment and population impacts were then disaggregated to the county level in order to provide a basis for analysis of impacts on local government units, community infrastructure, land use, etc.. From the point of view of doing impact analysis, this level of disaggregation is seriously deficient. While some public services are provided on a county-wide basis, most are provided at the community level. A realistic analysis of impacts on local communities and citizens therefore requires that population be disaggregated to the community level.

Socioeconomic Impacts

In order to properly evaluate the impacts of large-scale, rapid growth on the local area, it is necessary to follow several steps, including the following:

1) Project the total population impacts of MX deployment and disaggregate population to the local jurisdictions; and

2) Determine if the communities and counties in the impact area are capable of providing services to the immigration population with existing facilities and manpower, and estimate additional facilities and manpower necessary to provide adequate levels of service. This in turn requires that a set of planning guidelines and standards be developed relating service levels to population growth.

Regarding the first step, several arbitrary assumptions were made in the DEIS. First, under the preferred alternative (Base II at Milford) it was assumed that 90 percent of the civilian operation's workers employed on a base at Milford would live in Beaver County, five percent in Iron County and five percent in Millard County (ETR 27, page 99). No reasons for this allocation are given, but it appears to be quite unrealistic considering the fact that Cedar City would be within reasonable commuting distance (under 40 miles). The affect of this assumption is to overstate the impacts on Beaver County and understate the impacts on Iron County.

Second, it is assumed that 20 percent of the military personnel and their dependents would live in communities near the base and commute to work (ETR 6, page 103). There is no explanation of why this figure was assumed, but it is

not consistent with the figure (47 percent) given by the Air Force to the University of Utah, Bureau of Economic and Business Research. The affect of this may be to understate the magnitude of the impacts on the local communities.

Third, given a base at Beryl (Alternatives 2, 3, and 4), it is assumed that a "new town" would be built near the base which would attract 40 percent of the base personnel who do not live on the base (ETR 6, page 104). This is clearly an unreasonable assumption, considering the commuting distances to nearby communities and the preferences of local elected officials to direct growth to existing communities.

Fourth, the DEIS analysis disaggregates county-level estimtes of MX-induced population immigation into three general places of residence:

1) communities, with no distinction made among communities;
2) operating bases; and
3) construction camps (ETR 27, page 125).

The significance of this is that impacts on individual communities cannot be determined. The DEIS is therefore not very useful for state and local planning and evaluation efforts, and would be less useful as a decision making document at the national level.

With respect to the second step, the DEIS correctly points out tha MX deployment would produce "rapid, large-scale changes" in southern Utah and "boom-bust" growth similar to that caused by energy developments throughout the western United States (ETR 2). As a result, additional community facilities and services would be required. The Social Model and the Public Finance Model are used to estimate the additional services required and the costs and revenues associated with growth. Unfortunately, these models employ some questionable methods.

The Social Model uses a "service standard method" which relies on U.S. Census of Governments data to obtain averages of manpower per 1000 population for the common municipal functions (e.g., fire protection, police protection, etc.). However, this method is normally applied to moderately sized municipalities, between 10,000 and 50,000 residents, with moderate projected population growth (see Burchell and Listokin, The Fiscal Impact Handbook, Center for Urban Policy Research, 1980, page 6). The "case study method" is more appropriate for the MX study because it is normally employed for both residential and nonresidential analysis in very large or very small cities which typically exhibit significant excess or deficient service capacity so great that average measures, extended into the future, are inappropriate (Burchell and Listokin, page 5).

An example of the misleading results of the "service standard method" is police protection. The DEIS assumes that 2.0 police officers per thousand population is appropriate and is "assumed to be invariant for all population categories" (ETR 28, page 45). This is totally unrealistic for two reasons: 1) the ratio of police officers to population is currently higher than 2.0 (which is about the state average) due to the fact that the land area covered is greater than in urban areas; and 2) boom town growth always results in higher than average crime rates which necessitates greater than average police protection.

The Public Finance Model uses the per capita multiplier method which relies on average municipal costs per person, average school costs per pupil, and the number of persons or pupils generated by various housing types to project future municipal and school district costs (ETR 29, pages 3-4). Projected revenues similarly utilize a per capita measure (ETR 29, pages 5-6). This method, in the case of rapid growth conditions, will inevitably understate costs and overstate revenues. Costs will be higher than projected because competition for labor and materials will bid up prices significantly and a higher than average level of services will have to be provided to prevent a significant deterioration of living conditions. On the other hand, real per capita revenues are likely to fall, because local governments typically rely heavily on property taxes and assessment levels are not likely to keep pace with property values. Again, the "case study method" is more appropriate for rapid growth conditions (Barchell and Listokin, page 5).

Other Comments

1. The analysis found in the various backup technical documents is not always well-integrated into the DEIS. For example, the impacts of growth on the competition for labor and materials is examined in several documents (ETR 26, ETR 25, ETR 24, and ETR 2, which examines labor force and wage impacts). The results of this analysis is virtually ignored in the DEIS which reduces its value as a decision making document.

2. Various statements are made in the DEIS which are unsupported and sometimes even contradicted by analysis found in the technical documents. For example, it is stated in the SUMMARY (page 47) that communities in Beaver and Iron Counties would change but "the quality of life that appeals to residents and vistitors could be retained." This is flatly contradicted by the statement in a technical document that during the construction period many impacts in Beaver County will be "extremely adverse. Mitigation measures are not available to significantly modify the impacts" (ETR 33, page 2-28).

   Another example of an unsupported but significant statement is the following: "Degradation of quality of life is assumed to occur whenever county population growth rates exceed 15 percent in one year or when employment growth rates equal eight percent or more for three consecutive years" (page 2-146). It is then argued that growth rates in various counties, including Iron, "would not produce a significant impact on quality of life" (page 2-146). The 15 percent figure is not substantiated. Furthermore, the latter statement is misleading because of the faulty disaggregation of population impacts (see earlier discussion).

3. Neither the DEIS nor the technical backup documents contain an analysis of the impacts of rapid growth upon particular groups which typically experience the greatest adverse impacts, e.g., the aged, wives and children of construction workers, renters and particular groups whose incomes may be fixed or lag behind the inevitably higher local cost of living.

LOCAL RECREATION REVIEW TEAM

General Comments

The DEIS has not understood the recreation impacts of MX on any of the communities in the State of Utah. The report has identified some of the recreational possibilities in the various areas of OB sites. However, these recreational campsites and water-based recreational facilities are presently being used to full capacity and will definitely need to be expanded to accommodate MX personnel.

Being the largest construction project in American history to date, MX will naturally draw much attention and curiosity from Utahns and out-of-staters. Therefore, the visitor impacts on the area will increase drastically. No assessment has been made as to what affect this spin-off from MX will bring.

The DEIS acknowledges the present recreation facilities of the communities in Utah. However, it does not recognize the fact that these facilities are presently substandard, and any increase in demand due to MX will reduce the present level of recreation for these communities. It is important that the communities be provided data, funds, etc., so they can expand existing recreation programs and create new programs to handle the influx of people who will demand these facilities. New physical fitness facilities will need to be constructed. The DEIS should recognize that recreation needs to cover the broad span of different people's needs and interests, such as: pre-school youngsters, grade school children, young adults, adults and senior citizens.

Recreation in the DEIS is generally outdoor recreation. We feel attention needs to be given to community recreation on an indoor basis as well.

There is a great pristine open space in the West Desert. People get a recharge from going off alone in the vast open spaces; this will be taken away by MX. This is not a renewable resource. Once taken by MX, the beauty of this region will be lost forever.

The comments and data that folow are more detailed, but basically support the general comments.

1. The DEIS does not make enough demand projections.
2. It would appear that the analysis is incomplete and statistically in error in many areas.
3. Much of the data is accumulated from other information, not from assessment or analysis.
4. The DEIS has not identified voids or needs in the communities.
5. It would appear the only recreation planning is for the communities within the OBs. Nothing for surrounding communities.
6. Our water-based recreation facilities are already overcrowded, yet statements are made that there will be no significant impacts.

7. There is no analysis performed in the DEIS.

8. Who made the judgments in ranking the alternatives for recreation impacts?

9. A lot of the impacts are pushed over into the Las Vegas area because of its size and availability of recreation facilities. What about other areas besides the Coyote Springs OB?

10. The conclusion in the summary document that impacts on recreation will be insignificant is not true. There will be great impacts.

11. What about combined impacts? Caused by other developments associated with MX. Example: power plants.

12. Impacts appear to be assessed primarily with regard to MX personnel, and do not include those who will be involved in support services or related development projects.

13. Social needs are really not discussed, with only emphasis on the relationships to health and lifestyle.

14. How about the increased impacts on tourism (visits to MX sites)? Tourists will definitely impact recreation facilities.

15. There is no bowling alley in Cedar City, Utah.

16. St. George is hardly mentioned in the DEIS. The community is already heavily affected wtih recreation use, such as: golf, roller skating, Snow Canyon, etc..

17. Please identify the numerous recreation facilities in areas adjacent to Delta and Fillmore.

18. New Castle Reservoir is not mentioned in the DEIS.

19. Lake Powell is never mentioned in the DEIS.

20. An illusion of adequacy is created through the use of graphs and statements that appear to be outdated.

21. Discussion and evaluation of recreation impacts appears to be guided more by availability of data than by analysis of data. Example: extensive discussions exist on hunting and fishing, with pages of figures on wildlife populations--presumably these data were readily available from state agencies. However, the amount of attention devoted to those activities appears greater than their overall importance to the total recreation picture.

22. Scenic sightseeing or the visual resource is an important recreation activity and has not been addressed in the DEIS. The pristine open space of the West Desert is one of the main reasons this area is so attractive to the recreating public.

23. Comparisons of impacts might be made to other rapid growth communities and the types of recreation patterns and problems observed. Example: Sweetwater, Wyoming; Rock Springs, Wyoming.

24. What will be the outcome of construction in the remote areas--roads, shelters, etc., will interfere with the natural beauty, wildlife and hunting opportunities?

25. How much area (acres) will be closed to public use for such things as off-road vehicles, etc.?

26. Sections on quality of life suggest that it will be maintained, though there is no real treatment of this issue directly through availability of adequate recreation.

27. There are no statements on the impacts of the proposed IPP Project on Delta and the surrounding areas.

28. As stated in Section 3.4.3.3.7 (page 3-448), the "parks and playgrounds are evaluated as satisfactory by residents of the county . . ." Who made these statements? If they are satisfactory, they surely will not be with the MX impact.

29. Chapter IV is a comparative analysis of environmental consequences of the MX. Recreation resources will receive a significant impact--yet there is only a limited discussion on recreation.

30. The pristine open space of the West Desert is one of the main reasons this area is so attractive to the recreating public. Deployment of the MX system will eliminate the pristine open space in every major valley of western Utah.

31. It is also anticipated that with the deployment, use (access) in all the major valley systems will either be restricted or denied. This will have a serious impact on the recreation opportunities available in this area.

32. Another aspect is the recreation sightseeing opportunities which will be impacted. The visual resource has not been addressed in the DEIS. The MX project will have a very definite effect on the visual resources. The road networks will permanently alter the near natural landscape character that presently exists in the West Desert. The impacts will be long term because of the difficulty with revegetation.

33. The sections on land uses were much too short (especially for recreation) and too general.

34. How much area (acres) will be closed to public use?

35. The quality of the dispersed recreation experience will diminish due to the development of MX facilities and influx of population (Chapter IV).

36. What will be the impacts due to 30,000 workers' recreational needs?

37. If the MX system is declared obsolete in 15-20 years, what will happen to the remote areas of western Utah?

38. The impacts of potential wilderness areas (presently Wilderness Study Areas) is not adequately addressed.

39. MX construction (roads, shelters, etc.) will impact on wildlife and hunting opportunities.

I. Environmental Consequences of MX on Recreation

A. Community Recreation

A complete assessment and analysis needs to be made concerning community recreation. Please refer to Attachment A at the end of these comments which contains suggestions, principles and standards to improve community recreation developments and a planning framework to accomplish this.

B. Water-Based Activities

Please refer to the attached analysis (Attachment B) which has been done for park lands and water-related facilities concerning impacts of MX development and possible mitigations.

C. Off-Road Vehicle Use

Areas are presently being developed in Beryl, Milford and Delta for off-road vehicle use. MX will greatly impact this type of recreation. Off-road recreation is very popular among construction personnel and would also be among visitors wanting to see MX. Therefore, existing facilities will need to be expanded as well as new ones provided.

II. Beryl and Milford--Affected Environment

Both Beryl and Milford OB personnel would definitely use facilities in Cedar City. The current facilities in Cedar City are inadequate. The DEIS states there is a bowling alley and ski resort up Cedar Canyon. There are no such things! (Refer to page 3-381). Milford has very little recreation with the exception of a swimming pool. What little they have is associated with the school district and churches, not the community. Beryl has nothing. They are bused to Enterprise for schooling.

The park lands presently located near the Milford OB are overcrowded, and the ones near the Beryl OB site have shown continued increase in tourism. At the present time, the camping, boating, fishing, hunting, etc., facilities are beyond capacity. The impact to the park lands will be much greater than 50 miles, as stated in the DEIS. There is no mention made of the New Castle Reservoir, which is a very popular source of recreation. See Attachment A.

There are only two ski areas near the OB sites, Mount Holly in Beaver County and Brian Head in Iron County. These resorts are heavily used by skiers, snowmobilers, dog-sled racers, etc., from the area and also recreationists from Nevada and California. At the present time, the facilities could probably handle the impacts of people coming from the OB sites on weekdays, but on weekends and holidays the facilities will definitely not be adequate.

Because of the available off-road land resources, such as Coral Pine Sand Dunes State Reserve and Little Sahara Recreation Area, recreationists in off-road vehicles will be brought in. These facilities are at full capacity at the present time. MX will definitely have impacts on this type of recreation.

Because of people's curiosity to see MX, tourism will increase, and there will be much more demand for off-road vehicle recreation.

III. Delta--Affected Environment

Very few recreation facilities exist within the proximity of Delta and Fillmore. They presently have minimal community recreation programs. Therefore, personnel at the OB site in Delta will be required to travel for recreation facilities (such as parks, ski resorts, water-oriented activities, etc.). Due to visitation from Delta and all of the Wasatch Front, what few areas there are, such as Little Sahara Recreation Area and Yuba Lake State Beach, will be inadequate to accommodate the influx of people.

A minimum of 100 miles will have to be traveled to undertake any snow-related activities. It will greatly impact Mount Holly and Brian Head, because of the travel distance to other snow facilities on the Wasatch Front.

The Delta OB will heavily impact Yuba Lake, especially on weekends and holidays. See Attachment A.

Specific Comments

PAGE	PARAGRAPH	SENTENCE	COMMENT
2-151	5		If the Utah SCORP (1978 Draft) indicates that there will be a shortage of campsites in this region of Utah by 1990, how can the projected increase in population by 1991 from MX of 224 percent not be expected to produce a shortage of campsites in the vicinity of Milford? The SCORP projection, which showed there would be a deficiency, was without the MX influx. This

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				significant increase in population certainly would have an impact beyond the SCORP projection. What does the SCORP report indicate concerning the water-based recreation facilities? What about the use capacity (carrying capacity) of these water bodies? What are the impacts to fishing and water contact sports?
Section 2.3.29	2-151-152			This section of the DEIS is supposed to discuss the impacts (both positive and negative) of the Proposed Action. It is stated that the preferred alternative for recreation would be the Proposed Action. This is based on available data, scientific judgment and analysis. This information should be presented to show the impacts. A recommendation as to the best alternative should not be made at this stage of the document.
	2-169	5	1	What would be the projected population increase with the OB at Delta? What does the SCORP report indicate about campsites and water-based recreation facilities for the Delta region?
	2-181	8	1	The alternative is not clear --it is therefore difficult to understand the potential impacts.
	2-207	4	1	If half the system were deployed in New Mexico, why wouldn't that significantly change the impacts to the Utah recreation facilities?
	3-182	partial	4-6	The Great Salt Lake is outside the proximity of the deployment area (less than 60

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				miles) yet 90 percent of surface acres available for water-based recreation are identified there. Are the remaining 113,000 surface acres of area in western Utah within the 60-mile proximal?
Section 3.2.3.8	3-175-202			Scenic sightseeing is an important recreation activity and should be included in the discussion of recreation activities.
	3-350	6		There is also waterfowl hunting on the Sevier River, Gunnis Bend Reservoir, Clear Lake and Fool Creek Reservoirs. What are the existing recreation use levels? How would the recreation resources be affected in the Delta area?
	3-367	6-7		The only reference to recreation values is the mention of antelope, mule deer and fish. The number of animals and fishing opportunities presently available should be stated. The other recreation resources should be described as they relate to the area surrounding Beryl.
	3-382	partial	2	Parks are "expected to receive a great deal of the expected increased park visitation." The percent of increase should be described.
	3-387	8		Define how large an area the region surrounding the proposed OB site is. Although the lands may be private, this does not preclude dispersed recreation activities. Depending on the size of the "region," it seems that there would be some recreation resource in the area.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	3-445	5	1	Fillmore does not, at the present time, have an operating swimming pool.
	3-446	1	3	The Little Sahara Recreation Area has two developed campgrounds and a developed picnic area.
	3-446	2	2	There is another water-based recreation site in the area. Gunnison Bend Reservoir, just west of Delta has a boat ramp and camping and picnicking area.
	3-446	4		See comment p. 3-466, para. 2.
	3-446	6		Vehicle use is expected to increase on the BLM lands in the vicinity of Delta and Fillmore. There are no BLM lands east of Fillmore.
Table 3.4.3.3-6	3-447			There is no developed site at Maple Creek on BLM lands. There are 255 developed camp units at Little Sahara Recreation Area. The opportunities for dune buggy and ORV recreation comprise some 85 square miles (inside Little Sahara).
	3-504	6		What are the recreation areas located within the sphere of influence?

ATTACHMENT A

Community Recreation Analysis

In reviewing the DEIS there is a complete absence of planning for community recreation. Realizing that community recreation is the responsibilitiy of local government, there is concern regarding the ability of communiites such as Milford, Minersville, Delta, Parowan, Enterprise, Cedar City, etc., to adequately supply recreational facilities and programs for the potential impact.

Planning new or improving existing municipal recreation programs is not a simple problem. The programs themselves have many aspects, each of which involves special procedures and planning. The relation of recreation to the city plan, the essential requirements for an adequate system of publicly owned recreation spaces and the methods of acquiring and maintaining such areas are subjects of primary importance to the communities to be impacted by the potential growth of Southwestern Utah. Important to this impact is the fact that city planning concerns itself not only with physical development but also with the enrichment of life in our communities.

Effective integration of recreation areas into the city plan, or indeed into any sound plan for the acquisition and development of recreation space, must be based upon accepted objectives, principles and standards: definite objectives to be achieved by the system, basic principles essential to attain the objectives and specific standards for implementing the principles.

The chief objective sought in recreation, and which a system of areas is designed to help realize, has been called "the enrichment of living through the constructive use of leisure and the expression of normal human interest in art, dance, drama, sports, nature, the world of the mind, and social activities"[1]

However expressed, the purpose underlying a local recreation system is the enrichment of individual and community life through the beauty and recreation opportunities which the development of such areas makes possible.

Broad objectives have little significance until they are supplemented by principles that afford a basis for planning and action. Since the function of recreation areas is to serve recreation needs, the principles that underline a recreation program naturally have a direct bearing upon the planning of a well-balanced system of recreation areas and facilities. Such a system is achieved when it is designed to meet the following criteria:

1. Make possible recreation opportunities for all, regardless of age, color, race, creed or economic status.

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[1]Guide for Planning Recreation Parks in California, California Committee on Planning for Recreation, Parks Areas, and Facilities, Sacramento, 1956, p. 22.

2. Provide areas and facilities that make possible a great variety of recreation activities that serve a wide range of recreation interests.

3. Include areas that differ widely in size, location, natural features and potential development, and that consequently serve different recreation uses.

4. Insofar as possible, provide an equitable distribution of areas in each county and community.

5. Take into account existing outlying recreation areas and facilities that serve the people of the locality and, where advisable, include additional areas primarily for weekend and holiday use.

6. Be based upon a thorough study and appraisal of existing local recreation resources and needs, conducted with the full cooperation of citizens, municipal, school, planning authorities and other interested agencies.

Various groups, such as the National Recreation Association, have proposed development standards that should be incorporated into a future study of recreational needs in the area.

The team views the population growth of southwestern Utah as heavily impacting the individual and community lifestyles of its citizens. Additional study should be considered in the FEIS and it should follow the planning framework listed below:

1. Assess existing services and programs.

2. Determine the ability of services or programs to meet present and projected needs.

3. Identify voids or needs and how these might be met.

4. Develop any recommendations or alternatives which may assist communities or counties to meet voids or weaknesses as part of a growth management plan.

5. Discuss mitigation strategies and possible funding sources to meet these objectives should be developed.

ATTACHMENT B

Environmental Impact Analysis

Minersville Lake State Recreation Area

The DEIS is incomplete and somewhat in error. With regard to the Milford OB impacts, the DEIS refers to no expected unsatisfied demand for campsites or water-oriented activities. Sixty campsites will be needed to service the MX migrant population in the peak year. They are claiming that 75 campsites is all that would be needed in Beaver County, when in fact the Minersville Lake State Recreation Area complex has exceeded its capacity with the normal visitation caused by the fishing, water skiing, general camping, picnicking, etc..

Approximately 40,000 visitors utilized the area in 1980. With just an increase in normal use on a regular basis, it would be 45,000 visitors in 1981. Needless to say, with the existing 29 camp units it is pretty difficult to handle the normal load of traffic. The park would need an additional 30 campsites and one rest room. The estimated cost of these improvements would be $600,000.00.

The information illlustrated by Table 4.3.2.12-9 (page 4-664) regarding the density use is not correct. For example, they have given high impact to the Minersville Lake State Recreation Area by those migrants located at the Beryl OB but low impacts for those at the Milford OB. This is not true; the Milford OB would certainly have more impacts than the Beryl OB. The Beryl OB would definitely have an increased impact on Enterprise, New Castle Reservoir and Gunlock Lake State Beach (which have not been mentioned anywhere in the DEIS). The statement is made that water-oriented activities would occur at Lake Mead.

Those employed by MX are subject to the energy problems that exist. The MX people would use Enterprise, Gunlock Lake State Beach and New Castle Reservoir just as the local people do. A total assessment of existing roads, boat ramps, rest rooms, additional campsites and all other facilities needed to enhance and protect the area for public use is necessary.

During the 1980 season, there was a 20 percent increase in total use of the area by recreationists from Nevada and California. This can be surmised from real estate sales and the increase of boat and off-road vehicle registrations.

MX would increase recreation by at least 35 percent (this is only an estimate).

Snow Canyon State Park

Those employees stationed at the Beryl OB would possibly use Snow Canyon State Park. In the early spring and late fall, the park is generally full because of the mild climate. Having only 50 campsites and one rest room, additional facilities may be needed to accommodate the MX population influx. It would need two complete rest rooms and at least 50 additional campsites. The estimated cost of these improvements would be $450,000.00.

Coral Pink Sand Dunes State Reserve

This park reaches its saturation point during the early spring and late fall. The potential impact chart indicates moderate use. Even moderate use would make it a congested area and it would need expansion to accommodate new visitors. The rest rooms are operating at full capacity now. The water tank system is not adequate. There is a 10,000 gallon storage tank that services the ranger, residents and approximately 30 campsites. The system has failed three times. The system is too small to handle the high density use. Expansion would definitely be needed. At least one more rest room and an additional 30 campsites are needed. A new well should be drilled or improvements made to the existing water system. The estimated cost of these improvements would be $450,000.00.

Gunlock Lake State Beach

Gunlock Lake State Beach has almost doubled in visitation. Boating activity has gained popularity because of its close proximity to St. George and the conservation of fuel. The enforcement of the Boating Act has had to be increased an additional two days per week. Gunlock is the only large body of water within 20 miles of St. George and 60 miles of Cedar City. With moderate temperatures, the lake is extremely comfortable for swimming, water skiing, boating and fishing. This has caused considerable concern among those responsible for the area. The lake has become very dangerous to boaters. When all boats are moving, the lake will handle some 25 vessels, but adding a water skier to each boat cuts the use of the lake in half. At this time, the land-based operation is primitive in nature. Two pit toilets are the only sanitary facilities in the area; this is a concern to those using Gunlock. The impact table indicates there will be high density use from the Beryl OB. If so, the existing facilities are inadequate. To keep within Board of Health standards, complete rest rooms would be needed. Also day use areas and campsites would be needed. The estimated cost of these improvements would be $325,000.00.

Yuba Lake State Recreation Area

According to the impact table, Yuba Lake State Recreation Area is shown as moderate use for the Beryl OB. It is approximately 163 miles from Milford and some 215 miles from Beryl. The impacts will be critical on weekends and holidays, although the reservoir would be able to handle most boat traffic. In order to have a quality experience, the park would need additional improvements such as, improved roads, rest rooms, day use areas, drinking water, campsites, etc.. There is federal land adjacent to the park that could be used for the improvements. The estimated cost of these improvements would be $350,000.00.

LOCAL ARCHEOLOGY AND HISTORY REVIEW TEAM

General Comments

Archeological and historical data presented in the various sections of the DEIS will not serve to aid in making one of the major decisions for which the document is intended; they will serve in only a very limited manner, at best, in making the second major decision (page 1-57, para. 1, lines 1-2).

There are essentially no substantive data presented in Chapter III on the archeological and historical resources of the Great Basin OB suitability zones, and no or very little material presented on the known or potential resources of areas surrounding the zones where substantial indirect impacts would occur. Further, the bits of resource data presented in Chapters II and IV are wholly inadequate to support an impact analysis at any level. Impact analysis presented in Chapters II and IV and relevant to archeological and historical resources are, therefore, per force invalid; they may also be quite misleading for a decision maker, particularly where presented in a tabular format.

Since the sampling surveys conducted in 1980 (but not yet integrated into the EIS effort - ETR 23, pages 112 to 114) did not treat the OB suitability zones, and only marginally the broader areas surrounding the zones, there would seem to be little chance that a full and suitable assessment of the zones can be brought together for the final Tier 1 document. In short, it would appear that unless the OB suitability zone decision is held in abeyance pending rather extensive data gathering, archeological and historical resource considerations will not be part of that decision.

It will be particularly unfortunate if archeology and history do not weigh in the OB suitability zone decision. Indirect impacts associated with OB selection are going to be more difficult to mitigate than are direct siting impacts. Further, a prime mitigating measure that has to be developed at some point is one that will insure that an *in situ* data base is preserved for future generations of scholars; missing the opportunity to influence the OB suitability zone selection process may seriously hamper such an effort.

As to the selection of the DDA, the other major decision to be made based on the EIS, the methods used to obtain predictive data for archeological site distribution and projected impacts appear sound (pages 4-717 to 4-756 and ETR 23). Questionable is the data base itself. It is extremely small, poorly distributed for statistical purposes and simply may not be capable of supporting the kinds of analysis asked of it.

Nowhere in the DEIS or in ETR 23 is the existing data base adequately displayed for assessment. The best we are offered is a total number of sites (numbers, actually - somewhere between 1957 and 3000) and general site types. It is virtually impossible to even determine exactly what the area is that the base was drawn from. The DEIS chapters are vague, and the figure presented in ETR 23 (page 27) purporting to display this information is so cluttered that it is impossible to read. The area must be quite restricted, however, as more than 2000 documented sites can easily be accounted for in the western tier of involved Utah counties--an area that certainly should be included to ade-

quately account for indirect impacts.

Quantification of both resources and impacts is extremely poor throughout the DEIS portions dealing with archeology and history and pertinent to either the DDA or the OBs. Nowhere are numbers presented, and such terms as high, moderate and low--dealing both with sensitivities (densities) and impacts--are never defined except in terms of proximities.

With the DDA analysis, at least, there are still what should be good outstanding data (the Phase I sampling survey). While this survey will still constitute a very small sample, it is being conducted against a set of specific questions and should present a good base for specific and appropriate statistical manipulations.

One final and perhaps gratuitous general comment pertaining to ETR 23. Following rather lightweight sections on previous research and cultural history, there is in this document a very lengthy section (pages 35 to 70) given over to outright tinkering with the pitifully little data base and a set of highly questionable assumptions. This serves the substance and veracity of the supported DEIS section not at all, and at this particular juncture in the EIS process, this section should be replaced by something solid.

Specific Comments

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Section 2.3.33	2-155-159			Comments pertinent to most assessments and data introduced here (and in the balance of Chapter II) are to be found with comments on Chapters III and IV where the data are either originally presented or presented in more detail.
	2-156	1	1	400 square miles is a lot of resource. Is this meant to reflect 400 square miles of area with resources of particular sensitivity levels, or what?
	2-156	3		How great is the potential that in avoiding known sites at this early juncture, conflict has been introduced with even more unknown sites (given that a very high percentage of eligible National Register properties in the area are still unidentified).

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	2-157	1	1	Why was this 50-mile radius area not introduced and analyzed in Chapters III and IV where some precision in treatment is so badly lacking. An area that large, at least, will be required to account for indirect impacts associated with the OBs.
	2-157	2		The data presented in this document will not support these rankings (see archeology and history general comments and critiques, and comments on Chapters III and IV). A sound logical argument can easily be made for split basing being by far the least savory of the alternatives as regards impacts on archeological and historical resources--why waste substantial portions of two areas rather than sacrifice one and save the other.
	3-210	6	1	Should be noted that a great number of eligible properties have not been identified--those on or nominated to the register comprise only a tiny fraction of what will eventually be located. Also, note that criteria are such that a high percentage of <u>all</u> archeological sites are eligible properties (capable of yielding data).
	3-210	6	4	Referenced figure does not differentiate between National and Utah State Register properties.
Section 3.2.3.10.2				Extremely abbreviated outline of the area's culture history. Not well written.

PAGE	PARAGRAPH	SENTENCE	COMMENT
3-217	partial	3	Delete Pueblean. Note extensive Virgin Branch occupation in Southwestern Utah.
3-217	1	2	Exactly what is the area that the 2000 sites are from? Cannot extract that information here or from ETR 23. Must present more about this base: does it represent a substantial or insignificant portion of the projected base, does it represent all or only portions of the area under consideration, etc.
3-217	1	3-8	Why are historical site types introduced here with a separate section on historical resources immediately following? Are there actually, then, 3800 archeological and historical sites accounted for, or is there mixing of the groups and the total figure lower?
3-217	3	1	Mormon influence is central to the settlement and much of the development of much of the area--should be specifically noted.
3-217	3	4	"Boom and bust" is not really characteristic of the area as a whole. In many respects, this phenomenon operated outside a basic and ongoing stability.
Figure 3.2.3.10-1			Inappropriate to introduce impacts in a figure purporting to display National Register properties.
Chapter III, Part II			There is a great deal of confusion introduced in this chapter relevant to exactly what pieces of real estate are being analyzed. For examples: 1) The introduction to Part II is entitled

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				"Operating Base Vicinity Environment"; 2) The introduction to the section dealing with Beryl (page 3-357) notes that "The Area of Analysis (AOA) for the Beryl operating base includes Iron County"; 3) The same introductory paragraph goes on to say "The AOA is located in the south central section of the region of influence (ROI) as shown in Figure 3.4.1.1-1". The ROI is not defined here or in the glossary, and the area highlighted on Figure 3.4.1.1-1 (page 3-358) is known elsewhere as the Operating Base Suitability Zone. Much of the problem here surfaces after close reading of what the tiering process involves. Despite the fact that the major decisions to be made with this Tier 1 EIS are selections of the DDA and the OB suitability zones, the Air Force has defined its way into conducting considerable site-specific analysis by the use of "conceptual layouts" "tentatively sited" within suitability zones (pages 1-57 to 1-61). However, in Chapters II-IV, these "tentative" sitings become "the proposed site," the "Milford OB siting area," the "Beryl OB," etc.. With these terms added to the list noted above, and the analysis carried on concurrently, it often becomes essentially impossible to tell what the real level of analysis is.
Section 3.4.1.3.13	3-388			This is a wholly inadequate section.
	3-388	5	1	What and where is the "vicinity." For purposes of

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				assessing impacts (indirect particularly), we should be dealing with the suitability zone and at least a 50-mile buffer. This would encompass an area that at present probably includes better than 1000 documented archeological sites. Of particular concern in the more immediate areas are the dense concentrations of sites (some very large) associated (in part at least) with an obsidian source somewhere near Modena (exact source location not known at present; see 42In 109, 110 and 499 through 513 for site and density examples), and apparent late Paleo point from the Escalante Desert (see Hunt and Keller, and local professionals).
	3-388	5	4	Virgin Anasazi to the south, Fremont to the east.
	3-388	5	5	This is a meaningless piece of quantification.
	3-388	5	5	What exactly is a "potential historical site?"
				Paleontological resources should be weighted equally to archeological and historical resources; it is neither.
Section 3.4.3.3.13	3-452			Inadequate section. Also paleontology is not properly a subheading.
	3-452	2	1	In the vicinity of what, or where?
	3-452	2	3	Possible (?)--if not early man, from whence the prints.
	3-452	2	4	Examples? How close to what is the general area?

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	3-452	2	5	Meaningless quantification. Should be looking at 50 miles or better to account for indirect impacts.
Section 3.4.5.3.13	3-511			Wholly inadequate section. Should treat an area large enough to account for indirect impacts (50-mile radius). Good data are available from Blawn Wash, Mineral Mountains, Cunningham Wash, etc. (see local professionals). Historical resources in Milford (particularly railroad associated) should be dealt with, as well as Frisco and Newhouse and several kiln locations scattered in the foothills.
Section 4.3.2.14	4-717-755			Since this section does actually present a very few bits of hard resource data, plus a few reasonable guesses, what possible reason was there for Chapter III? The section shows some thought relevant to the kinds and general extent of impacts anticipated. However, there is no quantification of the sort that one can really come to grips with. "Real" numbers on sites, densities types, and projected losses will have to be produced for a satisfactory analysis.
Section 4.3.2.14.1	4-717	2		It may be a little misleading to lean so heavily on the National Historic Preservation Act. Citation of the Archeological Resources Protection Act (1979) would be appropriate. Again, it would be well to emphasize that only a tiny fraction of potentially eligible properties have been identified to date.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	4-717-718	3		Will the existing data base really support this kind of analysis? Review of ETR 23 indicates that this is highly questionable. The statistical and logical constructs presented in the ETR 23 rather resemble an inverted house of cards--it would not take much to bring it down.
	4-718	1		Reasonable statement, generally. Needs more precise quantification.
		1	2	What became of the "very high" sensitivity introduced in Section 4.3.2.14.1 (pages 4-717 to 4-756)?
Figure 4.3.2.14-1				This figure is useless unless some precision is introduced in the supporting narrative as to what areas of high sensitivity means. Are these the "moderate to high" areas introduced on page 4-718, para. 3, sent. 3; the "moderate to very high" sensitivity areas, page 4-718, partial, partial; or something else? Must have densities or numbers associated and compared to similar figures from areas predicted to have lower sensitivities. Use of the large triangles for National Register sites is misleading on the one hand, and makes the figure difficult to read. Presentation of only high sensitivity areas tends to draw one to an either/or, presence/absence conclusion not intended by the supporting narrative, and certainly not the case.
	4-718	4	last	Referenced Table 4.3.2.14-1 (page 4-721)--what is the rationale for assessing less

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				than high impacts for units with high sensitivity ratings?
	4-722 & 723			How do we accommodate the statements regarding the projected richness of areas surrounding the OB, plus those in the paragraph dealing with OB residential and residential area, with the graphic presentation of Figure 4.3.2.14-1 (page 4-719). The figure displays only siting data, these are no indications of sensitivity zones, etc..
	4-722	2	last	"Implement" ?
Table 4.3.2.14-2	4-723-729			Relative sensitivity and impacts are mainly assessed (too low) for units 52 and 53 (Lund, Beryl-Enterprise).
	4-734	2	1-2	Good statements on potentials for indirect impacts and the difficulty of mitigating them. Should be more prominently presented.
	4-735	1	1	The surveys may be conducted, but will they have any bearing on selection of OB suitability zones, or even specific siting?
	4-735	1	2	Where is this portion of the existing data base presented in either narrative, tabular or figure form?
	4-735	1	last	What is the region? Eighty percent of what (how many)?
	4-735	1	1-2	A good topographic map might be illustrative of these assessments, Figure 4.3.2.14-3 is not. Why are the referenced areas not color coded while the areas brought

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				forward from Figure 4.3.2.14-1 (DAA analysis) are?
	4-735	3	1	Decent statement. Could be expanded and refined. As an example, the Wildhorse Canyon property is not a particularly valuable archeological resource; however, the 100s (probably 1000s) of sites in and around the Mineral Mountains and these at least partially due to the obsidian in Wildhorse, are extremely valuable and are what will be impacted.
	4-735	6	1	The only sensitivity zones shown on Figure 4.3.2.14-3 are those brought forward from Figure 4.3.2.14-1 and pertinent to DAA analysis.
	4-737	1-2		Poor analysis of the potential of the area. See comments on the Beryl OB for Chapter III.
Figure 4.3.2.14-5	4-738			What is displayed here, what are the ledges, how is this keyed in the section on Delta OB Impacts? Singularly uninformative, as are other OB and vicinity figures in this section.
	4-739	5	1	Even a very liberal reading of the "rules" of the tiering process indicates that we should not yet be dealing with OBTS site-specific analysis.

General Comments: Local Native American Review Team

Congress has recognized the special relationship between the federal government and Native American Nations. This must be considered in planning and mitigation processes. Due to this special relationship there must be government-to-government negotiations.

The time frame for DEIS and EIS studies is inadequate considering the impacts indicated in these documents. Due to scope of the construction, DEIS committees are not given time to adequately review direct, indirect and cumulative impacts.

Many pertinent facts contained in Environmental Technical Reports are not entered in DEIS.

Request Native American studies and mitigation processes in the following areas: 1) artifacts/archaeology, 2) native resources/wildlife and plant usage, 3) health services, 4) tribal enterprises/economic development, 5) housing, 6) education/vocational training, 7) reservation land withdrawal and 8) water rights.

Based on the DEIS impact ratings, recommend split basing.

PAGE	PARAGRAPH	SENTENCE	COMMENTS
1-2	2		Add to Evaluation List: detailed, intensive Native American sacred site-specific analysis, water rights, land withdrawal for reservation expansion and mitigation specifics.
1-2	3	last	Delete: best available evidence. Add: adequate data necessary.
1-12	2	3	Delete: nautical miles. Add: all other references are in statutory miles.
1-16	2	2,3,4	Suggest that further realistic EIS studies be completed before MX expansion be allowed.
1-20	1	2	Dust palliative--composite is suspected of being harmful to environment. Definition of palliative: to cover by excuses and apologies. Per Websters New College Diction-

PAGE	PARAGRAPH	SENTENCE	COMMENT
			ary 1980. Definition dust palliative in question request additional studies.
1-20	2	1	Public access assured so that Native American sacred sites will not be impacted.
1-27	3		DTN road statement contradicts 1-20 para. 2.
1-38	8		All specific areas should be returned to natural state, and/or allocated to local or state population.
1-45	2		As presently constituted local committee does not have a Native American representative.
			Add:

Table 1.4.1 1-46

Potential Base Loc.	Community	1977 Est.	High Distance To Base (Miles
Utah Beryl	Newcastle	1,000	25
	Beryl Junction	1,200	5
	Lund	300	10
	Modena	17	20
	Garden Valley	100	16
	State Line	30	40

1-4	9	4	Add: 9. Protection of archaeological and/or traditional sacred areas.
1-50	2		Delete: entire sentence. Add: Shelter should be returned to natural state, land recovered, and/or access should be allocated to local, state or private groups.
1-51	2		Delete: igloo. Insert: shelter.
1-53	2	last	Recommend for economic and safety reasons that central facility be located near MX

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				locality and missile not be transported long distances for repair. No mention of how Air Force will guarantee public safety during transportation of warheads over long distances.
	1-53	5	last	Add: where hazardous wastes will be stored.
Table 1.6-1	1-55			Add:

Project Feature	Federal Permit	Agency
	Add:	Add:
Storage of Toxic Substances		Utah and Native American EPA Representative
Stream Crossings impoundment	Sec. 404	Native American Representative
Impact of Construction	Permit	Native American Representative
Impact of Construction	Tribal Leaders	Tribal leaders
Historic Trails		Native American Representative

Table 1.6-2	1-56			
	Water Appropriation			Native American Representative
	Disturbance of 20 Acres or More			Native American Representative
	Hazardous Waste Disposal			Native American Representative
	1-70	3		Add: Native American reservation acquisition, and/or reservation expansion. (P.L. 96-227 Stat. 317) must be coordinated with the BLM.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	1-71	3	1	Public land requirements not defined.
	1-72	2		Request Native American representative to Corps of Engineers--hopefully Corps of Engineers and Air Force will act in good faith during mitigation process.
Table 2.1-2	2-9			Add: Southern Paiute expansion--public and/or private lands withdrawal requests which will be identified before 1982 for reservation expansion.
	2-12	Registered Properties		Include proposed Indian archaeological and historical sites identified by the Paiute Cultural Resource person for inclusion in the National Register.
	2-67	4	5	Revegetation of the selected area is critical to preservation of Native American cultural survival, including food, traditional crafts and spiritual beliefs.
	2-105	5	3	The proposed Great Basin National Park issue is inadequate in the area of land and water withdrawal and long-term impacts. Request supplemental EIS.
	2-108	5		The unique values of Native Americans' lifestyles, social and religious organizations are rural in nature and have not been dealt with effectively in the quality of life section.
	2-111	3		Delete: entire paragraph.
	2-112	2		Information inadequate.
	2-115	4		Second and third statements

PAGE	PARAGRAPH	SENTENCE	COMMENT
			inadequate.
Figure 2.3-1		Short-Term Effects	
		Native American Cultural Resources	
PA	2-OB		question no significant impact
ALT 2	1-OB		question no significant impact
ALT 6	1-OB		question no significant impact
		Native American Water and Land Use	
PA	2-OB		question no significant impact
ALT 1	2-OB		question no significant impact
ALT 2	2-OB		question no significant impact
ALT 3	1-OB		question no significant impact
	2-OB		question no significant impact
ALT 4	1-OB		question no significant impact
ALT 5	1-OB		question no significant impact
ALT 6	1-OB		question no significant impact
		Native American Migration	
ALT 2	2-OB		question no significant impact
Figure 2.3-1		Long-Term	
		Native American Water and Land Use	
PA	DDA		question no significant impact
	2-OB		question no significant impact
ALT 1	DDA		question no significant impact
	2-OB		question no significant impact
ALT 2	DDA		question no significant impact
	2-OB		question no significant impact
ALT 3	DDA		question no significant impact
	1-OB		question no significant impact
ALT 4	DDA		question no significant impact
	1-OB		question no significant impact
ALT 5	DDA		question no significant impact
	1-OB		question no significant impact
ALT 6	DDA		question no significant impact
		Native American Migration	
PA	DDA		question no significant impact
ALT 1	DDA		question no significant impact
ALT 2	DDA		question no significant impact
ALT 3	DDA		question no significant impact
ALT 4	DDA		question no significant impact
ALT 5	DDA		question no significant impact

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	ALT 6	DDA	question no significant impact	
Section 2.3.5	2-121	6	last	Insufficient data.
Section 2.3.5				No mention made of Native American uses of natural vegetation.
	2-126	partial	2	Inconsistent with previous statement about availability of water to revegetate area (p. 2-67, para. 4).
	2-126	2	last	Vague statement; does not relate value of marsh reeds to Native American weaving crafts.
	2-135	5	1	Direct contradiction to page 2-111, para. 4, last sentence--stable social and cultural conditions.
	2-152	2	last	Add: these studies.
	2-152			Add: (between para. 3-4) The lack of Native American ancestoral and cultural data available is insufficient to make a decision related to the preservation of sacred sites within the deployment area.
	2-154	2		Delete: entire sentence.
	2-154	5		Insufficient data and research. Add: Richfield (85), Shivwits (189), Cedar Colony (138), Indian Peaks (30) and Kanosh (74).
	2-155	partial	1	Add: Mitigation process should state why, when, where and how; deadlines set and economic plans should coincide with tribal base development. Define: central reservation.
	2-155	last		The PMOA has no Native Ameri-

PAGE	PARAGRAPH	SENTENCE	COMMENT
			can members. The Air Force has established a PMOA review committee. Under committee membership no Native American listed.
2-156	4		Before construction a reasonable time must be given to establish properties and prevent unavoidable damage.
2-157	1	3	Add: Indian Peak Game Refuge Area, formerly Paiute Reservation lands.
2-157	4	3	Add: Illegal fossil collection has, does and will occur.
2-157	5	3	More site-specific studies should be mandatory during Tier 2 analyses.
2-163	last		Due to dense site concentration in the former Indian Peaks Reservation area, thorough site markings and protection must proceed construction phase.
2-164	1	2	One reason Native American land and/or water resources do not show impact is because Paiute Reservation expansion began in April 1980, under Public Law 96-227; mitigation process for land withdrawal is presently being developed between the tribe, BIA and the Air Force.
2-164	2	1	Correct: Shivwits Reservation population 189 not 65.
2-164	3		Proposed Action studies for site-selection not adequate. Native American sites within 50 miles of Milford OB must be thoroughly documented before beginning construction.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	3-56	5		No reference made to traditional usage by Native Americans of natural vegetation and soils.
	3-56	last		No mention of Native American usage of local clays to produce pottery, out-door ovens and decorative paints.
	3-74	3		Information should have been collected before draft was published for thorough examination.
Table 3.2.2.6-1	3-66 and 67			No further information on reptiles discussed in dialogue following Table 3.2.2.6-1.
Section 3.2.3.7				Add: section on Native American Reservation or Reservation Expansion lands.
	3-175	6		Campgrounds and major recreational areas should be constructed to avoid Native American religious sites.
	3-182	1		ORVs should be restricted to select areas, marked to avoid Native American religious sites.
	3-202	3		Add: hunting areas--Yucca--Cactus--*juniper tree (medicine tree)*. Unidentified sites of cultural significance are currently in use, and are inhabited today following the traditional Paiute migration pattern.
		4	1	Delete: other purposes. Add: religious, medicinal and crafts.
		4	2	Delete: as in aboriginal times. Add: In current times.
		last		Add: Native American uses of

PAGE	PARAGRAPH	SENTENCE	COMMENT
			riparian species should be identified. For example: squaw bush (berries and willows). Insufficient data.
3-208	7		According to Public Law 96-227 passed in April 1980, the Southern Paiute Nation was awarded 15,000 acres. Land withdrawal for reservation expansion has yet to be determined.
3-208	7	3	Delete: The federal government has two years to develop its plan. Add: The Paiute Nation has two years to develop the Paiute Reservation plan.
Table 3.2.3.9-1	3-209		Add:

Reservation	County Located	Tribal Group	Acreage	Date Est.	Pop. Est.	BIA Agency	Tribal Headqtrs.	Tribal Gov't.[9]
Shivwits	Washington	Paiute	28,160	1903	189	Phoenix	Cedar City	6
Richfield	Sevier	Paiute	5.5	1972	85	Phoenix	Cedar City	6
Kanosh	Millard	Paiute	80	1929	74	Phoenix	Cedar City	6
Indian Peak	Beaver	Paiute	0	NA	30	Phoenix	Cedar City	6
Cedar City	Iron	Paiute	5	1974	138	Phoenix	Cedar City	6

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				Delete: Note. Add: Note: Southern Paiute Nation awarded 15,000 acres PL 96-227 Stat. 317. Land yet to be identified. Add: The Interim Tribal Council under P.L. 96-227 is the governing body for the 5 Southern Paiute bands listed above.
	3-210	4	1	Insufficient data on present and future Native American water rights which include expansion.
	3-210			Native American reservation and colonies. Proposed reservation expansion not shown for Southern Paiutes.
	3-210	5 and 6		Unidentified sites should be identified as to Native American religious and sacred sites.
	3-210	last	2	Delete: It is thought that, follow and the past tense.
Figure 3.2.3.9-5	3-214			Indian Peak--water resources (not marked). Whiter Mountain near--Baker (not marked).
Figure 3.2.3.10-1				Not marked--Domingus Escalante Trail, Parowan gap, Spanish Trail, Modena--some Obsidian beds.
	3-217	partial	2	Delete: entire sentence. Add: Numic speaking groups migrated into the Great Basin following Archaic pattern of seasonal movement and utilization of natural food resources.
	3-217	1	1	Delete: exploited by past occupants. Add: utilized by current occupants.
	3-217	2		Archaeological Native American sites must be identified

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				and preserved.
	3-217	3		Information inadequate as referring to Native American historical sites, battle grounds, campsites and home-sites and burial grounds.
Section 3.4.1.1	3-357	2		Add: In 1849 . . . for settlement by encroachment on Southern Paiute lands. At any rate, in the final judgment the Southern Paiutes were awarded $8,250,000 for 29,935,000 acres of land (this figure apparently being only an estimate, as the Commission states: "The overall acreage involved in all of these claims is approximately 29,935,000 acres, we are advised.") This adds up to about 27¢ per acre.
		3	1	Should be past tense. Add: Paiute land withdrawal $15,000.
	3-367	6		What about the wild horses and burros that are numerous in these valleys?
	3-369	partial	3	No Native American rare plants or animal species identified--inadequate information, request supplemental EIS studies.
Section 3.4.1.3	3-369			No references made to provide for minorities under hiring, housing, health care, education, police and firemen and community infracture.
				Escalante Valley Migrant Housing Project--during seasonal employment as high as 200 migrant workers and their dependents, mostly Native Americans from various areas in the west, 96 percent minority, work for minimum

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				wages for local agri-business farms and ranches. These people could benefit from vocational training to adjust to the deployment of the MX missile in the Great Basin area.
Section 3.4.1.3.2	3-373			When mitigation processes are implemented, vocational training and other educational opportunities for minorities will increase the standard of living for migrant workers who are now restricted to minimum wages.
Section 3.4.2.3.3	3-373			Recommend that Title IV and Title XX and other minority or disadvantaged funds be attached directly to minority educational groups.
Section 3.4.1.3.4	3-373			Add: Migrant and minority population count.
Table 3.4.1.3.-4	3-375			Add: note at bottom of chart. Utah 1979 per capita income $7,004.00 Southern Paiute Nation 1979 per capital income $1,968.00
Table 3.4.1.3-7	3-378			Add: minority funding sources Title IV, etc.. No information on federal and state funds.
Section 3.4.1.3.5	3-380			No minority statistics given. What about HUD development?
	3-380	4		No minority statistics--such as studies of enrollment or number of professional staff who are members of minorities. Information about education and impacts totally neglected. The population of analysis area will be highly impacted. Should be analysis of surplus capacity and a needs assessment for necessary growth planning for

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				educational facilities and staffing.
	3-380	5		The Paiute Nation, Interim Tribal Council is placing health care as the number one priority of tribal goals. This Section contains no needs assessment regarding health care for minorities.
	3-387	1		No reference to Southern Paiute Nation Reservation land expansion.
Section 3.4.1.3.12	3-388	2	3	Public Law 96-227 Stat. 317 provides that old reservation lands be restored to the extent possible but not to exceed 15,000 acres, with the approval of Congress, in addition to 26,160 acres retained by the Shivwits band and 80 acres of original reservation lands retained by the Kanosh band of the Paiute Indian Tribe of Utah.
		4	3	Site--specific information on socioeconomic environment . . . of the Southern Utah Paiute Nation is not being collected. The Southern Paiute Nation requests representation.
		4	3	Correct Shivwits.
	3-388	5		Not consistent with OB Beryl evaluation. Short term camps not mentioned. Also--31 percent of the area . . . OB Beryl site predicted to contain historical sites. No mention of this in earlier information.
	3-388	5		More thorough site and unidentified sites surveys must be made. Delete: Puebloan. Add: Anazasi

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	3-425	2	1	Correct: Millard's first European settlement was . . . Native American inhabitants have lived in the area of analysis for centuries before the migration of European emigrants.
	3-450	3 and 4		Kanosh Reservation was established in 1929. No mention is made of present Southern Paiute Reservation expansion processes under PL 96-227 Stat. 317.
Section 3.4.3.3.12	3-451			Native Americans--Contemporary Southern Paiutes moved into the Sevier Desert basin after the forced migration . . .
			last	Delete: aboriginal. Add: traditional.
	3-452	1		First sentence is incorrect. There are reservation lands, i.e., Kanosh. Last sentence: Site specific data on Native American cultural resources and socioeconomic environment are being gathered at . . . (incorrect). Site--specific data is not being collected. The Southern Paiute Nation requests representation on data gathering team when established.
	3-452	2	1	Incorrect: There are no recorded archaeological or historical sites in the vicinity--insufficient data--site-extensive studies not done.
	3-485	2	1	Incorrect: Beaver County's first settlement was Beaver founded in 1856 as a Mormon colony. Correct: Beaver County's first settlements were Native Americans. These Native American settlements

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				were here for hundreds of years before European emigrants came into the area.
Section 3.4.5.3.11	3-509	7		Land use plans--no information about PL 96-227 Stat. 317 Southern Paiute Nation Reservation Expansion.
Section 3.4.5.3.12	3-511	1	1	Delete: aboriginal. Add: traditional.
			5	Delete: field research. Add: no site-specific Native American studies are being done.
Section 3.4.5.3.13	3-511	3		Site-specific studies must be collected so that Native American sacred sites will be documented.
Book IV Part III				Add Chapter IV Part II first. Starts with 4-493 on 2 pages.
Section 4-3.2.13.1.1	4-677	1	3	Strike: last sentence. Studies not completed about Native Americans.
	4-677	2	partial	Past and present usage--delete: exploited.
	4-678	1		Add: PL 95-96 Archaelogical Resources Protection Act of 1979.
	4-679	1	3	Add: . . . represents an 80 percent irretrievable loss to the Native American and scientific communities.
	4-679	2	3	Add: Data insufficient about Native Americans.
Section 4.3.2.13.2	4-679	3	2	Add: Native Americans request representation in site selection process during Tier 2.
Section 4.3.2.13.2	4-679	3	4	Delete: possible mitigation measure. Add: should be required measure.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
		3	last	Delete: possible mitigation measure. Add: a required measure.
	4-680	2	3	Delete: Representatives of the Moapa Reservation consider. Add: Representatives of the Moapa Reservation and the Southern Paiute Nations consider . . .
	4-680	3	1	Milford OB Impacts--Delete: was. The Northern Escalante Desert. Add: Is . . .
		3	2	Delete: Direct impacts . . . may occur. Add: Direct impacts . . . will occur.
		4	1	Add: A mitigation measure will be the inclusion of representatives from the Southern Paiute Nation in ... Delete: Kanosh and Cedar Bands.
Map 4.3.2.13-1				Native American sensitive areas. Coyote: No sites marked on map designated for that purpose. Data insufficient. Request supplemental EIS studies.
Figure 4.3.2.13-2	4-685			Native American sensitive sites and areas. No sites marked on this map. Data insufficient. Request supplemental EIS studies.
Book IV Part II				
Section 4.3.2.6.2.1	**4-493**	1	3	Delete: if this service. Add: when this service.
		3	3	Delete: or left unfilled. Add: These services must be provided.
Section 4.3.2.6.2.2	**4-498**	1	9	Contractor could provide. Delete: could. Add: must.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	4-498	1	9	No minority health care statistics, projections or mitigation strategies for minorities mentioned. Request supplemental EIS studies.
Section 4.3.2.8.1	4-533	3	2	Add: and preservation of traditional spiritual values.
	4-534	2		Delete: second paragraph. An opinion--not factual.
Section 4.3.2.8.1	4-535	partial	2	Cultural definition not acceptable. Delete: entire definition. Add: The forced change of spiritual and cultural values by the rapid influx of a more progressive and competitive culture represents a large negative impact to the quality of life of local inhabitants.
Table 4.3.2.13-3	4-687			Other affected subunits. Environmental Technical Reports state 80 percent direct and indirect high impact for these areas. Chart indicates no or low impacts. Verification of facts necessary. Request supplemental EIS.
	4-688	1	1	Insufficient data gathered. Request supplemental EIS studies. Delete: was formerly exploited. Add: is presently utilized.
			last	Delete: aboriginal. Add: traditional.
4.3.2.13.1.4	4-688	4	1	Delete: aboriginal. Add: traditional.
			3	Areas adjacent to the rivers, delete: were. Add: are.
Map 4.3.2.13-4	4-688	3	last	Coordination of suitable mitigation measures with the Paiute Tribal council who are

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				the bands governing body.
	4-689			No sites identified, data insufficient.
Table 4.3.2.13-4	4-690			How can direct construction in these areas show low impact ratings; seriously question data given as study is insufficient. Request supplemental EIS studies.
Map 4.3.2.13-5	4-691			No Native American sites shown on map, data insufficient.
4.3.2.13-5	4-692			Seriously question low and moderate impact rating; data insufficient. Request supplemental studies.
4.3.2.13.1.5	4-693	3	4	Delete: aboriginal. Add: traditional.
4.3.2.13.1.7	4-696	3	5	Delete: aboriginal. Add: traditional.
4.3.2.13.1.9	4-696	6	2	Delete: aboriginal. Add: traditional.
Chart 4.3.2.13-7	4-698			Shows high impact for direct and indirect use. Contradicts information on previous tables. Request supplemental EIS studies.
4.3.2.13.2.3	4-707	6	1	Delete: does not impact any identified Native American land or water resources. Add: The Paiute Nation owns water rights to former Indian Peaks Reservation land.
4.3.2.13.3.1	4-711	1	2	Delete: aboriginal. Add: archaic.
	4-712	1	2	Delete: generally . . .
4.3.2.13.3.3	4-712	5	1	Shivwits Reservation population--Delete: 65. Add: 189.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
4.3.2.14.1	4-717	2	5	. . . intensively surveyed during Tier 2 studies. Add: the Paiute Nation requests strong Native American representation during Tier 2 studies.
	4-718	2		Site sensitivity research data inadequate for conclusion drawn. Request supplemental EIS studies.
4.3.2.14.2	4-718	3	5	Delete: exploitable. Add: usable.
	4-722	1	1	Delete: is likely to. Add: will.
		2	4	The Paiute Nation requests strong Native American involvement in Tier 2 studies.
	4-722	4	3	PMOA and Advisory Council on Historic Preservation--no Native American on these committees. The Paiute Nation requests representation on the committees for Tier 2 research processes.
	4-737	1	4	Beryl OB Impacts lists three sites--not consistent with previous information. Request supplemental EIS studies.
		3	2	Insufficient data. Request supplemental EIS studies.
4.3.2.14.5	4-739	5	5	Paiute Nation requests consideration of alternative DTN access route to avoid pass to Pine Valley, which contains sacred burial sites.
Book IV Part II				
	1	3	last	Available evidence not adequately documented in which to base decision. Request supplemental EIS study.

PAGE	PARAGRAPH	SENTENCE	COMMENT
2	2	4	Delete: Entire 4th sentence . . . Not a documented fact.
2	2	6	Delete: Entire 6th sentence.
2	3		Add: Historical evidence demonstrated that every weapon designed by man has been used for military purposes, not peace.
3	3	1	Delete: entire first sentence. Add: A total analysis of the EIS clearly shows that the direct, indirect and cumulative impacts would cause least disturbance to natural and human environments for Alternative 8--split basing. Total impact rankings: as per MX DEIS: PA = 120 Alternative 1 = 125 Alternative 2 = 117 Alternative 3 = 139 Alternative 4 = 132 Alternative 5 = 138 Alternative 6 = 136 Alternative 7 = 85 Alternative 8 = 82
3	6	3	All these roads will be open to public use.--Not consistent with statements in Program Overview. Request greater clarification of statement.
3	7	3	Add: Native American sacred sites.
5	2	4	Add: and to Native American Nations.
5	4	last	Add: establishment of liaison with Native American Nations.
5	7	1	Add: Environmental information inadequate on which to base any decision. Request

PAGE	PARAGRAPH	SENTENCE	COMMENT
			supplemental EIS studies before any decision is made.
6	1	1	Add: Expansion should not be allowed without further studies and EISs.
6	2	3	Add: Native American Nations.
6	4	2	Add: Siting team must include Native American representatives from the impacted tribes.
6	5	1	Add: Study completed by Facilitators, Inc. on Native Americans and the impact areas were not included in Tier 1 studies. This was a tremendous economic waste.
7	partial		Add: Tier 2 studies are proceeding without adequate Tier 1 baseline, site-specific and cultural data, as proposed by dates and guidelines and proceeds statements in the summary pages 6-7, discussion of tiering.
7	1	2	Add: Addresses, names and title of report necessary for requests, should be included.
7	2	1	Add: Request that a draft supplemental EIS be prepared, to include thorough cultural and traditional sites specific studies, with regards to Native American concerns.
7	3		Add: Native American cultural traditional, and contemporary issues.
8	1	3	Add: Baseline data on Native Americans' rock art, ancestral habitation sites, ceremonial sites or structures, battlefields, ceremonial

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				sacred/materials and contemporary gathering/hunting areas is so poor as to place any quantitative analysis of the predicted action invalid.
	8	2	1	Add: definition of mitigation should include full meaning. Websters Dictionary, 1980, "to make less painful; to make soft or tender."
Figure 5	Chart	Short-Term Effects		
		Native American Cultural Resources		
		PA	2-OB	question no significant impact
		ALT 5	1-OB	question no significant impact
		ALT 6	1-OB	question no significant impact
		Native American Water and Land Use		
		PA	2-OB	question no significant impact
		ALT 1	2-OB	question no significant impact
		ALT 2	2-OB	question no significant impact
		ALT 3	1-OB	question no significant impact
			2-OB	question no significant impact
		ALT 4	1-OB	question no significant impact
		ALT 5	1-OB	question no significant impact
		ALT 6	1-OB	question no significant impact
		Native American Migration		
		ALT 2	2-OB	question no significant impact.
				Add: #3 Direct, indirect and cumulative impacts studies have not been adequately prepared to deal with Native American issues and concerns, therefore, the no and low significant impact conclusions drawn on these charts are not valid. Request supplemental EIS on Native Americans.
Figure 6	Chart	Long-Term Effects		
		Native American Water and Land Use		

PAGE	PARAGRAPH	SENTENCE	COMMENT
	PA	DDA	question no significant impact
		2-OB	question no significant impact
	ALT 1	DDA	question no significant impact
		2-OB	question no significant impact
	ALT 2	DDA	question no significant impact
		2-OB	question no significant impact
	ALT 3	DDA	question no significant impact
		1-OB	question no significant impact
	ALT 4	DDA	question no significant impact
		1-OB	question no significant impact
	ALT 5	DDA	question no significant impact
		1-OB	question no significant impact
	ALT 6	DDA	question no significant impact
		1-OB	question no significant impact
	Native American Migration		
	PA	DDA	question no significant impact
	ALT 2	DDA	question no significant impact
	ALT 3	DDA	question no significant impact
	ALT 4	DDA	question no significant impact
	ALT 5	DDA	question no significant impact
	ALT 6	DDA	question no significant impact
			Add: #3 Direct, indirect, and cumulative impacts studies have not been adequately prepared to deal with Native American issues and concerns. Therefore, the no and low significant impact conclusions drawn on these charts are not valid. Request supplemental EIS on Native Americans.
9	2		System layouts . . . enter: Changes in layout have occurred to planned analysis areas since publication of the DEIS. For example: Duck Water Reservation had proposed shelters located on Reservation lands in early proposals. Immediate negotiation began to relocate site.
			Studies should be completed on impacts to the Moapa Paiutes through water withdrawal.

PAGE	PARAGRAPH	SENTENCE	COMMENT
			P.L. 96-227 was not considered when designing system layouts for missile deployments. This law states that the Paiute Indian Tribe of Utah can acquire 15,000 acres reservation (enter law).
9	2		Add: As land is withdrawn possible expansion of reservations will be jeopardized, thus restricting land acquisition for present and future economic development.
9	3	3	Add: Adverse impacts of a sequential nature were not offered as a part of the Draft EIS. Recommend that draft supplemental EIS studies be completed dealing with this alterntive before construction begins. Demonstrate or offer proof of impacts of sequential construction as a minimizing adverse agent.
9	4	2	Add: This DEIS should represent a total data base for quantitative analysis of the impacts of the proposed deployment and site-specific determination.
9	4	4	Add: request that Air Force monitoring/compliance plan be available to the public on request (include address) and that Native American representatives be members of the monitoring/compliance team representing all impacted tribes, by persons who are members of tribes.
10	2	5	Sentence not consistent with facts presented in the DEIS. Request supplemental EIS study.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	10	3	2	Add: and they will be highly impacted.
	12	1		Add: More studies need to be done, not consistent with previous studies in the DEIS. Request supplemental studies.
	13	partial	1	Sentence not consistent with previous statements in the DEIS. How does the Air Force propose revegetation without water? Request greater clarification.
	14	2	1	Add: Request supplemental EIS considering testing pollution during construction in deployment area with regards to dust.
Mitgations	15	2	1	Add: dust--request supplemental EIS concerning dust suppressive chemicals.
	15	4	1	Add: Disturbed areas--how will this be achieved? Request greater clarification or supplemental EIS.
	17	5	2	Add: Natural recovery is not expected with the lifetime of the MX project. This is an unacceptable impact of the MX. Request greater clarification of mitigations.
	17	5	3	Add: Not consistent with statements in the DEIS. Revegetation mitigations are not included, and should be. Request greater clarification or supplemental EIS studies.
Mitigation	17	5	3	Add: Vegetation reclamation . . . not consistent with other statements in DEIS. No water will be used for revegetation. Request greater clarification of plants that

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				can grow without water.
	19	2	2	Add: Compared to the New Mexico/Texas area impact studies, a 40 percent loss of the native pronghorn antelope in Utah/Nevada is not an acceptable alternative.
	19	3	2	Add: Disappearance of pronghorn in Coyote OB area is not an acceptable impact.
Mitigation	19	8	1	Add: Question if surface water is not to be used, where will the water come from? Request greater clarification or supplemental EIS studies.
	20	2	1	Add: Prohibition of rifles--should hold true for military persons and local community members. Request greater clarifictaion of how rule will be enforced.
	21	1	4	Add: A 50 percent loss of sage grouse population is not an acceptable impact.
	23	1	5	Add: A loss of 2,000 tortoises is not an acceptable impact.
Mitigation	23	8		Add: The desert tortoise is a traditional natural resource of the local Native American, and their cultural concerns must be considered. Request supplemental EIS study.
	24	2	3	Add: Clauses contained in sentence are contradictory. How can the impact be small for the prairie dog when this endangered species habitat is the same area as that of the sage grouse, and desert tortoise? Request greater clarifictaion of issue.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
Rare Plants	25	Rare Plants		Add: Native American uses of natural plants are not considered. Request a draft supplemental EIS considering Native American traditional uses of resources.
	28	2	last	This statment is not consistent with DEIS statements: 160,000 acres vegetation will be irreversibly destroyed, 50 percent or more on local animals, etc.. Request greater clarification.
	31	3		Add: No minority statistics offered. Request employment and labor force minority studies.
Mitigation	32	6		Add: tribal governments, migrants and other minority agencies.
Mitigation	33			Add: Request economic assistance for minorities, the elderly and other low-income groups.
Mitigation	36	3	1	Add: Not acceptable based on American tradition of family unit preservation. The Air Force would be paying to separate fathers and husbands from wives and children.
Housing Mitigation	38	Mitigation		No mention is made of minority housing needs. Mention should be made about tribal government being eligible to claim surplus housing after the boom period. Request a supplemental EIS study on minority housing needs.
	39			Public Finance--No mention of minority studies in this area. Studies should include dispersement of funds directly to Native Americans, and other minority groups.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	40			Add: In the past, revenue sharing and tax return in forms of services have been very limited to Native American people. Request: plan of operation that would include equity in dispersal of funds to Native American peoples and tribal governments.
Mitigation	40	Mitigation		Add: list of federal agencies to contact for dispersal of funds in all areas for tribal governments.
	41	2		Education--Request impact studies on local higher education services offered to Native American and implement plan to assure adequate funding for increased services, as pertaining to teaching staff and curriculum development.
	43			Health Services--Add: Mitigation Contractor must supply health services for personnel as needed for construction workers. This must include modular health clinics. Supplemental funds may be necesary to serve influx of Native American workers from out of area tribes.
Public Safety	44			Add: Mitigation: #(3) Request training for Native Americans and other minorities in public safety areas to enhance cultural cooperation and understanding.
Mitigations	46	2	1	Add: tribal governments.
	46	8	1	Add: and tribal reservation expansion.
	46	9	2	Add: and tribal governments.

	PAGE	PARAGRAPH	SENTENCE	COMMENT
	46	10	1	Add: regional, and tribal land use planning . . .
	47	3	5	Quality of Life--How can quality of life be retained? Request supplemental EIS study for greater clarification.
	47			Add: Mitigation--Recommend split basing to lessen impacts on quality of life.
Mitigation	49	6	1	Add: Establish training programs for local residents in transportaiton area, to include Native Americans.
Mitigation	51	8	1	Add: Request studies concerning impact to Native American sensitive archaeological areas on south facing slopes.
Mitigation	53	4	1	Add: Coordinate land withdrawal with tribal governments.
	54	2		Add: Beryl to study--request supplemental EIS studies in Beryl area.
	55	2	2	Refinements at Tier 2--not consistent with other statements in DEIS. Request greater clarification or supplemental EIS.
Mitigation	58	7	1	Add: To protect Native American sites from direct and indirect impacts.
Mitigation	60	6	1	Add: Request Native American representation on PMOA Committee.
	60	9	1	An inventory will be completed by whom and when? Request greater clarification. Request Native American representatives from each tribe from impacted area,

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				from both traditional and modern factions.
	61	3	1	Add: Request a full-time liaison officer from each tribe to coordinate tribal affairs.
	61	3	1	Delete: maybe. Add: must be.
	61	5	1	Delete: maybe. Add: must be.
	61	5	2	Cultural resource monitoring will be implemented when and by whom? Request greater clarification.
	61	6	1	Cultural resource monitoring will be implemented when and by whom? Request greater clarification. Request Native Ammerican representative from all tribes impacted.
	62			Water & Land Use--Mitigation: Add: should coordinate with tribal governments as to reservation and land acquisition.
	63	partial	3	Delete: whole sentence.
Native American Mitigation	64	2	1	Correct: Shivwits, 189. Add: Richfield, 85; Kanosh, 74; Cedar City, 138; Indian Peaks, 30.
	64	2		Add: In the past local Native American and minority economic stability has not been improved by large rapid-scale development.
Mitigations	64	6	1	Add: Address of federal agency to contact for federal aid. Should be published in EIS.
	64	7	1	OEA Waiver--clarify defini-

	PAGE	PARAGRAPH	SENTENCE	COMMENT
				tion of waiver statement.
Mitigation	66	2	2 and 3	Request Native American representative on PMOA, and monitoring program, and date plans to be published.
	66	6	3	Request greater clarification of monitoring program for archaeological deposits with regards to whom and when it will start.
Appendice				
Review Committee Guidelines 5-97				B.I.C. Add: #3 Representative from each impacted tribe to be members of review committee.

CORRESPONDENCE ON QUALITY OF REPORT

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

August 17, 1981

Kenneth C. Olson, Director
Utah MX Project Field Office
445 East 400 South, #103
Salt Lake City, Utah 84111

SUBJECT: UTAH MX PLANNING AND IMPACT MITIGATION FIELD OFFICE
[illegible] No. 6(37)11-81-032-6

Dear Ken:

The Second Progress Report on the above referenced project has been received in this office and has been reviewed and accepted. The payment in the amount of $150,000.00 is now due. This payment was processed in Washington, D.C. on August 17, 1981. You will receive payment directly from that office.

If you have any questions or need further assistance, please contact this office.

Sincerely,

Keith M. Ketson
Deputy Executive Director

KMK:ckk
Enclosure
cc: Federal Cochairman
Dale Carpenter, Chairman

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR - 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

MEMORANDUM TO: Henry Wade
Commissions Accounting

FROM: Louis D. Higgs
Executive Director

SUBJECT: Project Name: UTAH MX PLANNING AND IMPACT MITIGATION
Project No.: 6(MS)11-899-032-6
Document No.: 10150032
Grantee: STATE OF UTAH, MX COORDINATION OFFICE
Appropriation No.T/115/5282-30/52-00/250-01

DATE: August 17, 1981

Please obligate funds in the amount of $150,000.00.

As set forth in the terms of the Grant, I hereby authorize the Third Payment in the amount of $150,000.00 to be made as follows:

Make Check Payable To: STATE OF UTAH, MX COORDINATION OFFICE

Send Check
To The Attention Of: Kenneth C. Olson, Director
Utah MX Project Field Office
448 East 400 South, #103
Salt Lake City, Utah 84111

A copy of this memo is also enclosed to be sent with the payment.

* *

CERTIFICATION OF TECHNICAL PERFORMANCE

STATE OF UTAH, MX COORDINATION OFFICE has provided satisfactory technical performance for completion of the above referenced project. This payment is consistent with all terms and conditions of the Grant.

Keith M. Dotson

Keith M. Dotson, Deputy Executive Dir.

8/17/81
Date Requested

Louis D. Higgs

Louis D. Higgs, Executive Director

8/17/81
Date Approved

cc: Federal Cochairman
Governor Matheson
Utah MX Field Office
Dale Carpenter, Chairman

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR - 2350 ALAMO S.E., SUITE 303, ALBUQUERQUE NEW MEXICO 87106
AREA CODE (505) 766-2990

[redacted]

Ken Wilson, Director
Utah MX Project Field Office
445 East 4[redacted] South, #103
Salt Lake City, Utah 84111

SUBJECT: [redacted]

Dear Ken:

This letter is to confirm our telephone conversation on July 27, 1981 in which I requested one (1) additional submission on your Second Progress Report. It is as follows:

1) A complete list of Contractor's, including names and addresses, along with the amounts awarded, obligated and expended against each.

Please make note that this submission will become a requirement on all subsequent progress reports.

If you have any questions or need further assistance, please feel free to call this office at anytime.

Sincerely,

Carol Beth Kent

Carol Beth Kent
Project Assistant
for MX Administration

CBK
cc: Federal Cochairman
Dale Carpenter

bcc: fcc/chron/[redacted]/reading

FOUR CORNERS REGIONAL COMMISSION

OFFICE OF THE EXECUTIVE DIRECTOR · 2330 ALAMO S.E., SUITE 303 ALBUQUERQUE NEW MEXICO 87106
AREA CODE 505 766-2990

June 19, 1981

Kenneth S. Olsen
Richards-Olsen Associates
[illegible]

[illegible]

[illegible] Second Progress and Financial Report [illegible] July 1, 1981.

[illegible]

[illegible] $150,000.00 [illegible]

[illegible]

Sincerely,

Carol Beth Kent

[illegible]

cbk
[illegible]

CERTIFICATION OF PERFORMANCE

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

July 7, 1981

Mr. Louis D. Higgs
Executive Director
Four Corners Regional Commission
2350 Alamo, S.E., Suite 303
Albuquerque, New Mexico 87106

SUBJECT: FCRC GRANT #6(MS)11-899-032-6
SECOND PROGRESS REPORT

Dear Mr. Higgs:

Pursuant to the delegation of authority from Governor Scott M. Matheson to the undersigned to be "principally responsible for performance of the grant", I hereby certify that all terms and conditions of the grant awarded have been complied with, based upon information available to me.

Should there be any questions with regard to this certification, please contact me as necessary.

Sincerely,

Kenneth C. Olson, Project Manager

APPROVED:

Dale B. Carpenter, Chairman
Utah MX Management Committee
Four Corners Regional Commission Alternate

STATEMENT OF ACKNOWLEDGMENT

STATE OF UTAH, MX COORDINATION OFFICE

SECOND PROGRESS REPORT

UNDER GRANT #6(MS)11-899-032-6

COVERING THE PERIOD APRIL 1, 1981 THROUGH JUNE 30, 1981

SUBAGREEMENT AND CONTRACT MANAGEMENT

The Utah MX Coordination Office has consistently monitored the performance of: 1) the Utah State Planning Coordinator's Office in its development of MX baseline and population projections, 2) the Four County MX Missile Policy Board in its contract administration of the Fiscal Impact Reconnaissance Study, the Fiscal Management Study Design, the Tax Consequences Study and the Federal Information Sharing Effort, insofar as the state share of these efforts is concerned and to assure that time schedules have been met, that the work is accomplished according to plan and that the products developed as part of this interagency agreement are satisfactory to the grantee(the Utah MX Coordination Office).

STATUS ON SUB-CONTRACTS

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

RECEIVED
JUL 31 1981
FOUR CORNERS REGIONAL COMMISSION
ALBUQUERQUE, NEW MEXICO

July 27, 1981

Mr. Louis D. Higgs
Executive Director
Four Corners Regional Commission
2350 Alamo, S.E., Suite 303
Albuquerque, New Mexico 87106

REFERENCE: STATE OF UTAH, MX COORDINATION OFFICE
UTAH MX PLANNING AND IMPACT MITIGATION GRANT
FCRC #6(MS)11-899-032-6
SPECIAL REPORT

Dear Mr. Higgs:

Responding to a telephone request of today's date from ~~Mary~~ Carol Beth Kent of your staff, we are enclosing a listing of the current cooperative agreements entered into between the Utah MX Coordination Office and various other public agencies. Please note that the Utah MX Coordination Office has no contracts or procurement arrangements for contractual services from non-governmental entities.

Since no format for this report was specified, we trust that the format used here will be acceptable. We do wish to note, in passing, that this report was not required by the terms and conditions of the grant and is apparently being requested in response to an Air Force requirement for this information.

We trust you will let us know if you have any questions regarding this matter.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:de

Encl.

cc Governor Matheson
Ralph Starr

STATE OF UTAH, MX COORDINATION OFFICE

CONTRACTOR REPORT

UNDER GRANT #6(MS)11-899-032-6

COVERING THE PERIOD APRIL 1, 1981 THROUGH JUNE 30, 1981

Listing of Cooperative Agreements or Other Contracts

No.	Party Contracted With	Type of Contract	Purpose	Amount Obligated	Amount Paid as of 6/30/81
1.	Utah State Planning Coordinator	Cooperative Agreement	Baseline population projections for operating base assumptions	$10,000	$10,000
2.	University of Utah, Bureau of Economic & Business Research	Cooperative Agreement	Modified baseline population projections to incorporate Intermountain Power Project impacts	3,000	3,000
3.	Four County Missile Policy Board	Cooperative Agreement	Pay state share of fiscal impact study; multi project management, accounting and reporting system; governmental revenue consequences study; and federal information acquisition and dissemination	43,000	0
4.	Utah Division of State History, Dept. of Community & Economic Development	Cooperative Agreement	Conduct cultural resource reviews	6,000	0
5.	Utah Division of Wildlife Resources, Dept. of Natural Resources & Energy	Cooperative Agreement	Conduct wildlife resource reviews	6,000	0

PROGRESS REPORT

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

July 7, 1981

Mr. Louis D. Higgs
Executive Director
Four Corners Regional Commission
2350 Alamo, S.E., Suite 303
Albuquerque, New Mexico 87106

SUBJECT: STATE OF UTAH, MX COORDINATION OFFICE
UTAH MX PLANNING AND IMPACT MITIGATION GRANT
FCRC #6(MS)11-899-032-6
SECOND PROGRESS REPORT - APRIL 1, 1981 THROUGH JUNE 30, 1981

Dear Mr. Higgs:

Enclosed are 12 copies of the Second Progress Report which outlines, in considerable detail, the activities of the staff of and contractors associated with the Utah MX Coordination Office with regard to the above referenced grant. Attached to the narrative of the progress report are numerous specific attachments, many of which are considered to be "products" under the terms of the grant. Accordingly, we are submitting 23 copies of all such "products" associated with this report. Please note that we have previously submitted some "products" to you such as the State of Utah review comments on the MX Draft Environmental Impact Statement during the period covered by this report.

Also contained within this report package are the fiscal reports required under the grant. We believe they provide appropriate detail in outlining the current financial status of the grant.

Should you or any reviewer of this report have any questions regarding the report, in any of its particulars, please contact the undersigned at the Utah MX Coordination Office, 448 E. 400 South, Suite 103, Salt Lake City, Utah 84111 or by calling (801) 364-9647.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:de

Encl.

cc Governor Scott Matheson
Utah Management Committee
Steve Bradhurst
Ralph Starr

STATE OF UTAH MX COORDINATION OFFICE

SECOND PROGRESS REPORT

UNDER GRANT #6(MS)11-899-032-6

COVERING THE PERIOD APRIL 1, 1981 THROUGH JUNE 30, 1981

INTRODUCTION

This Second Progress Report covers a period of performance under the above-referenced grant running from April 1, 1981 through June 30, 1981. As required by the grant conditions, the report is organized around the outline of the MX Impact Planning Detailed Work Program for Fiscal Year 1981 and is further based on the reporting requirements specified by the U. S. Air Force. The report treats each task specified within the work program in sufficient detail to permit reviewers to fully assess progress to date. Significant problems are also identified and corrective measures described.

GOAL I - Liaison, Coordination and Program Management

Final decisions on MX weapons system deployment have still not occurred. This means that planning activities are still based on very tentative scenarios and that most of the activities carried out by the staff of the Utah MX Coordination Office continue to be in the area of liaison, coordination and program management. This goal area encompasses all of the interactions among governmental entities engaged in the process of contingency planning and preparation for the deployment of the MX weapons system should deployment occur in Utah. Most, if not all, of the work in this goal area is process related, with few specific products resulting from these tasks.

TASK I.1 - Continue Bi-State Coordination with the State of Nevada

During the reporting period, there were at least weekly telephone contacts between the staffs of the Utah MX Coordination Office and the Nevada MX Project Field Office. The following specific meetings were held which involved the staffs of the two offices, either meeting for specific bi-state purposes, or in joint technical meetings also involving Air Force personnel:

Date	Meeting
April 3, 1981	MX Education Working Group - Cedar City
May 11, 1981	Impact Aid Threshold Concepts - Washington, D. C.
May 12, 1981	Intergovernmental/Interagency Task Force on Community Impact Assistance (803 Study) - Washington, D.C.
May 19, 1981	Intergovernmental/Interagency Task Force on Community Impact Assistance (803 Study) Washington, D.C.
May 28, 1981	Transmission Coordinating Committee - Las Vegas
June 10-11, 1981	Cultural Resources - San Francisco
June 11, 1981	General Bi-State Policy Decisions - Las Vegas
June 12, 1981	MX Education Working Group - Las Vegas

In addition, Governors Matheson and List met in Washington, D.C. to review bi-state MX matters on April 3, 1981. Periodic telephone conversations were also held for the purpose of planning meetings to insure proper bi-state coordination and to eliminate duplication of effort wherever possible. Attached to this document as Attachment 1 are copies of the meeting minutes, and where available, agendas, attendance lists and handouts for all bi-state meetings.

This task is proceeding satisfactorily, and no future problems are

anticipated.

TASK I.2 - Coordination with the Utah MX Missile Policy Board

At least daily contact takes place between the Utah MX Coordination Office staff and the MX Missile Policy Board staff in Cedar City. In addition, the staffs of the two offices meet as often as necessary, often "piggybacking" these meetings onto other meetings called for different purposes. (No minutes of these meetings are kept). The following specific meetings were held for the purpose of coordination between the staffs of the state and local MX offices:

Date	Meeting
April 9, 1981	General Planning Coordination - Salt Lake City
April 13, 1981	Transportation Impacts - Cedar City
April 22, 1981	DEIS Review Process - Planning Coordination - Salt Lake City
May 11, 1981	Fiscal Impact Issues - Washington, D. C.
May 22, 1981	General Planning Coordination - Siting Issues - Salt Lake City
June 13, 1981	General Planning Coordination - Salt Lake City
June 16, 1981	Fiscal Impact Analysis Issues - Salt Lake City
June 23, 1981	Bloc Grant Fiscal Control Issues - Salt Lake City

This task is proceeding extremely well, and no future problems are anticipated.

TASK I.3 - State MX Task Force and Functional Area Working Groups

During the reporting period, several specific functional area working groups which had either been previously established or recently

established met to deal with specific problems. These groups and their meetings are listed as follows:

Working Group	Status	Meeting Dates	Location
Cultural Resources	Ad Hoc	June 1, 1981	Salt Lake City
Education	On-going	April 3, 1981 June 12, 1981	Cedar City Las Vegas
Energy-Transmission Coordinating Comm.	On-going	March 30, 1981 May 28, 1981 June 12, 1981	Salt Lake City Las Vegas Salt Lake City
Minerals - Base Siting	Ad Hoc	June 10, 1981	Salt Lake City
MX Site Review Board	Newly-formed	May 22, 1981	Salt Lake City

In addition, meetings were also held in some functional areas where it has been unnecessary to establish working groups. The following specific meetings were held:

Date	Location	Meeting
April 23, 1981	Salt Lake City	Air Force MX Siting Meeting
May 15, 1981	Milford	Air Force Ranching and MX Weapon System Siting Meetings
June 11, 1981	Salt Lake City	Quarterly Water Resources Briefing

Attachment 2 contains copies of all the working groups' meeting minutes, and where available, agendas, attendance lists and handouts, while Attachment 3 includes copies of all the functional areas' meeting minutes, and where available, agendas, attendance lists and handouts. Also attached is a chart showing the structure of these working groups and their participants.

This task is proceeding satisfactorily and no future problems are anticipated.

TASK I.4 - MX Draft Environmental Impact Statement Review

During the reporting period, the State of Utah's review of the Tier I MX DEIS on Deployment Area Selection and Land Withdrawal/Acquisition was completed. Comments from all of the state MX DEIS review committees were forwarded to the Utah MX Coordination Office, and consolidated by staff into the State of Utah's official comments. Comments from the local, University Consortium and legal MX DEIS review committees were attached to the state's comments as separate appendices. On April 23, 1981, Governor Scott Matheson formally transmitted the State of Utah's MX DEIS comments to Vern Orr, the Secretary of the Air Force, as scheduled.

The State of Utah's comments were distributed to the Utah Congressional delegation, the Air Force Regional Civil Engineer's Office for MX, the Utah MX DEIS committee chairmen, the other candidate deployment area states, as well as to all of the libraries in the State of Utah. The State of Utah's comments have already been forwarded to the Four Corners Regional Commission during the reporting period.

No additional EIS related technical interchange meetings were held during the reporting period; however, such meetings will be held during the next reporting period. Also, no other MX committee chairman feedback meetings were held. MX DEIS meeting minutes, and where available, agendas, attendance lists and handouts for the preceeding reporting period are included under Attachment 4.

No problems were encountered in completing this task during the reporting period. Current Air Force plans are not entirely clear

regarding the date of issuance of the FEIS, nor for issuing Tier II environmental assessments. Air Force timetables will determine further activity in this task.

TASK I.5 - Coordination with the Air Force's Comprehensive Base Efforts

During the reporting period, the Utah MX Coordination Office reviewed several BCP deliverables. These comments are appended as Attachment 5. In addition, two BCP review meetings were held during the reporting period - the first was held on May 18th in San Francisco and the second on June 24th at Norton Air Force Base.

In our judgement, the Air Force has set unrealistically tight schedules for the review of these deliverables, and insufficient copies were provided for an adequate review. On several occasions, this situation was discussed with the Air Force and their consultant, EDAW, Inc. During the reporting period, the review time has been marginally expanded, and several more copies of the deliverables have been supplied. However, these problems have not been satisfactorily resolved to date, which perforce, affects our ability to thoroughly review and effectively respond to the adequacy and appropriateness of the deliverables. There is also a danger that the Air Force and EDAW will fail to understand the critical concerns of state agencies relative to this process. We hope this situation will improve during the next reporting period.

TASK I.6 - Coordination with the Corps of Engineers Life Support and Construction Planning Process

The concept study phase of this task was concluded in the last report period. The anticipated succeeding phase of this process dealing with construction planning and sequencing did not begin during the reporting period. The Draft Construction Management Plan which has been circulating between the Corps of Engineers and the Air Force has not been provided to the State MX Coordination Office. As a result, no contingency planning for construction impacts has been able to proceed. It is hoped that this situation will be rectified.

TASK I.7 - Information Dissemination

As has been the case in the past, the Utah MX Coordination Office continued to disseminate large numbers of copies of its analyses, reports and studies (most prominently, in this report period, the State of Utah's comments on the Tier I MX DEIS), as well as to make available to relevant state agencies and private interests copies of the Air Force contractors' studies. These materials were distributed to the following: The State MX Management Committee, the MX technical working groups, state and federal agencies, elected officials, and, on request, to the general public. Our experience has been to make approximately 65,000 individual pages of documents available on the average for each month during this reporting period. The unusually high volume was due to the State of Utah's comments on the MX DEIS. In addition, general information was provided to several Air Force contractors, to the General Accounting Office, to journalists, to civic groups and clubs upon request.

No problems were encountered during the reporting period, and none are anticipated in the future.

TASK I.8 - Development of Community Impact Assistance Mechanisms

The Utah MX Coordination Office continued to be involved in the 803 Study (mandated under public law 96-418) during the reporting period. In this task, the Utah MX Coordination Office has focused on development of a process for providing impact assistance in a fashion which would not unduly harm the affected local and state jurisdictions in both Utah and Nevada.

During the reporting period, discussions were held with Air Force and Office of Economic Adjustment staff on threshold criteria for impact assistance and on specific revisions to the primary 803 Study alternative. In addition, discussion and interaction on Draft MX Impact Assistance Legislation was undertaken. (This item is discussed more fully under Task III-1 below.) The process discussions incorporated in this task took place on May 11th and 12th, and on May 19th and 20th in Washington, D. C. This work (Section 803) was largely concluded during the reporting period. In future reporting periods, this task will focus on the development of workable regulations and processes to support impact assistance programming.

It should be noted that during the reporting period, Governor Matheson testified on impact assistance measures, before the House Subcommittee on Military Facilities and Construction on April 3, 1981. He also met with Utah's Congressional delegation to discuss these issues as well as with other members of Congress, in key positions, to address impact assistance issues.

TASK I.9 - Development of State Legislative Requirements

Due to the continuing tentative nature of the basing mode decision

for MX, no work on this task was undertaken during the reporting period. However, the Interim Legislative Committee on Natural Resources and Energy asked for testimony from the MX Coordination Office, on May 6, 1981, regarding the state DEIS review comments, anticipated MX impacts, possible state legislative responses, and possible federal legislative responses. The Utah Legislative Interim Committees will wish to begin considering responses during the next reporting period, if a deployment decision occurs affecting Utah.

TASK I.10 - Manage the A-95 Clearinghouse for MX

During the reporting period, revised draft procedures for A-95 Clearinghouse review and comment on state and local agency applications for federal assistance partly or wholly dependent on MX were selectively distributed for comment. A copy of the most recent draft process is attached as Attachment 6. During the reporting period, only three applications for MX-related federal assistance were received by the general state clearinghouses and forwarded for review. It is anticipated that the volume of applications will greatly increase if MX moves toward significant likelihood of deployment.

This work is proceeding without problem.

TASK I.11 - MX Planners Coordination

Due to deployment uncertainty, the Community Planners Advisory Group, representing local jurisdictions, counties, cities and area-wide associatons of governments in or adjacent to the MX deployment area, did not meet during the reporting period. Discussions with

the Wasatch Front Regional Council of Governments have begun reviewing potential urban impacts. This task will be reactivated only following a deployment decision.

TASK I.12 - Utah MX Intergovernmental Working Group

The Utah MX Intergovernmental Working Group met twice during the reporting period, on April 22nd and May 28th. Copies of the meeting minutes and agendas are included under Attachment 7. In the past, the IWG has generally met on the fourth Wednesday of each month alternating between Salt Lake City and Cedar City; however, during subsequent reporting periods, the meetings will be held on the fourth Thursday of every month (alternating between the same cities). During the reporting period, meetings of the IWG continued to be procedural, organizational and informative in character. However, during the reporting period, the IWG also began to deal with policy issues such as Base Comprehensive Planning, the Utah Fiscal Impact Study, the Utah Fiscal Management Study and the FY 82 Work Program.

This task is proceeding very well, and has made a very positive contribution toward coordinated planning.

GOAL II - Impact Analysis

The activities under this goal proceed from Goal I, but are assessment and product oriented. Given the lack of site-specificity in most of the materials reviewed, foremost among them the Tier I MX DEIS, only limited specific impact analysis has been conducted during the reporting period.

Each task in this goal area is discussed below:

TASK II.1 - Environmental Impact Statement Analysis

(For clarity, the reviewer should examine Attachment 4 and the State of Utah's comments on the MX DEIS.)

This review was completed during the reporting period.

The consensus of the Utah MX DEIS review committees was that it would be imprudent to attempt to establish a data base associated with MX impacts, given that the MX DEIS was incomplete and uneven. To date, it has not been prudent from either a cost or management perspective to begin to computerize the impact data.

During the reporting period, the MX Siting Review Board was established for the purpose of coordinating the comments and recommendations of all agencies and parties having vested or management interests in the Utah MX weapon system layouts. Attachment 8 contains relevant MX Siting Review Board materials.

The Air Force's siting process is still evolving. Apparently the State of Utah's comments on the layouts for Pine and Wah Wah Valleys (IOC) will not be incorporated into revised layouts until all Utah valleys have gone through at least the first iterative layout (sometime in the fourth reporting period).

Given the recent establishment of the MX Siting Review Board, it is not yet possible to assess the potential for problems. However, Attachment 9, a letter to Colonel William Sims from the Utah MX

Coordination Office, provides an outline of the issues as they are presently perceived.

TASK II.2 - Comprehensive Base Planning Impact Analysis

During the reporting period, EDAW's Deliverables 3, 5, 6, 7, 8, 10, 13, 16, 21 and 24 were reviewed. With the exception of Deliverable 8, the deliverables were generic in nature and, as a result, not amenable to specific impact analysis. However, Deliverable 8: Land Use Plan - Beryl and Milford, was amenable to impact analysis and was so analyzed. (See Attachment 5).

It is expected that as future iterations of the deliverables become available in subsequent reporting periods, detailed impact analyses will be conducted. However, if the future deliverables are not substantially different from those received to date, detailed analyses will not be possible.

TASK II.3 - Corps of Engineers Life Support and Construction Planning Impact Analysis

During this reporting period, neither the Corps of Engineers nor the Air Force have released the MX Construction Management Plan. Therefore, no impact analysis could be conducted. Future activity in this task is dependent upon Air Force release of specific data.

TASK II.4 - Phase II Study Comprehensive Impact Analysis

During the reporting period, a draft of the Phase II study for Beaver and Iron Counties was released for review and comment.

State agencies are providing technical review comments to the MX Coordination Office which will forward comprehensive comments to the MX Policy Board. This task is proceeding on schedule. (The draft report itself will be attached to the Policy Board progress report).

No future problems are anticipated.

TASK II.5 - Fiscal Impact Analysis

During the reporting period, a joint state and local contract was entered into with the firm of John Sanger and Associates. Under the contract, Sanger will conduct a reconnaissance and conceptualize a fiscal impact analysis. This contract is intended to outline a detailed approach of how Utah should conduct a fully detailed fiscal impact analysis. Site visits were conducted in Utah by Sanger's team during mid June. The results of this contract will become available during the next reporting period.

No future problems are anticipated.

NOTE: The Utah MX Coordination Office and the MX Missile Policy Board have entered into a cooperative agreement under which the Policy Board acts as the contracting agent for the Fiscal Impact Study with Sanger and Associates; the Fiscal Management Study with Peat Marwick Mitchell and Company; and the Tax Consequences Study with John Short and Associates. The scope of work for these projects will be deliverables in the Policy Board's progress report. The cooperative agreement is enclosed as Attachment 10.

TASK II.6 - Scope of Work for Phase III

Because the previously performed Construction Management Plan was not released during the reporting period, it has not been possible to develop an approach to conducting the Phase III work. This task will await full delineation of the construction process, both management and areal sequencing.

Future problems are not expected.

Task II.7 - Facilities Siting Analysis

This task is being more closely integrated with the environmental impact analysis activities. To date, various state agencies and private interests have been provided with copies of site layout maps for Pine and Wah Wah Valleys, geotechnically suitable area maps for the other Utah MX deployment area valleys, and base vicinity zone maps for Beryl and Milford. This will facilitate the collection of both broad-based and site-specific data to refine the environmentally acceptable siting areas. The Utah MX Coordination Office coordinates the state agencies' responses, and further has developed a consolidated state position on the Air Force's MX siting process. NOTE: For clarity, the reviewer should examine Attachment 8, which contains relevant MX Siting Review Board materials.

No further problems are expected.

GOAL III - Impact Mitigation and Planning

In this goal area, most of the work conducted during the reporting period continues to be preliminary in nature.

TASK III.1 - Community Impact Assistance Mechanism and Process

As noted under Goal Area I, Task I.8, the 803 Study is currently in the hands of the Executive Office of the President. Depending upon the specific decisions made in both the executive and legislative branches, this task will focus upon specific mechanism implementation during the next two months.

No future problems are anticipated.

TASK III.2 - Development of a Fiscal Management System for Community Impact Funds

During the reporting period, a joint state and local contract was entered into with the firm of Peat, Marwick, Mitchell and Company. Its purpose is to conduct a reconnaissance level study that will conceptualize a fiscal management program suitable for managing MX mitigation funds at the state and local level. Site visits have been conducted in Utah in late June. This task is expected to be completed during the next reporting period. This study will serve as the basis for the full development of the fiscal management plan, should a deployment decision be made.

No future problems are anticipated.

NOTE: The Utah MX Coordination Office and the MX Missile Policy Board have entered into a cooperative agreement under which the Policy Board acts as the contracting agent for the Fiscal Impact Study with Sanger and Associates; the Fiscal Management Study with Peat, Marwick, Mitchell and Company; and the Tax Consequences Study with John Short and Associates. The scope of work for these pro-

jects will be deliverables in the Policy Board's progress report. The cooperative agreement is enclosed as Attachment 10.

TASK III.3 - Development of a Comprehensive Facilities and Services Plan

Since a deployment decision has not been made, and a process for handling impact assistance has not been authorized by the Congress, no work on this task was accomplished during the reporting period. Given the current timetable for the deployment decision, it is anticipated that this task could be undertaken in the third quarter of the fiscal year.

TASK III.4 - Economic Development Plan

Initial work on the economic development plan is awaiting delivery from the firm of Hammer, Silar, George Associates who are under contract to the Office of Economic Adjustment. Once the preliminary HSG report is received, and using site specific deployment data, staffs from the state and local MX offices will delineate a more detailed approach to developing an MX-related economic development plan. No firm date for delivery of the HSG work has been given. It is anticipated that this task may begin during the next reporting period.

TASK III.5 - Development of a Fiscal Year 1982 Impact Mitigation Work Plan and Budget

During the reporting period, all state agency estimates of FY 82 planning requirements were developed, reviewed, revised and con-

solidated. These requests were organized into a single budget submittal package which will go to the Congress. In addition to planning funds, it is anticiapted that FY 82 preconstruction funds will be required for highway development due to the long lead times involved. As a result, the Utah Department of Transportation has prepared estimates of the funds which will be required during FY 82. Preconstruction work on high priority roads and highways must begin in FY 82 in order to meet the current MX construction and deployment timetable.

The delay in the Administration's decision on MX deployment, and attendant legislative deferral of mark-up to the appropriations bills relative to the MX program, has postponed the accomplishment of this task until the third or fourth reporting period. However, the preliminary budget estimate has been submitted to the Utah MX Intergovernmental Working Group. A copy is enclosed as Attachment 11.

STATE OF UTAH, MX COORDINATION OFFICE

SECOND PROGRESS REPORT

UNDER GRANT #6(MS)11-899-032-6

COVERING THE PERIOD APRIL 1, 1981 THROUGH JUNE 30, 1981

MONTHLY EXPENDITURE REPORTS

As required by the grant conditions, this report shows estimates of expenditures by goal area for the months of April, May and June of 1981 as listed below:

Goal Area	April 81	May 81	June 81
Goal I - Liaison, Coordination and Program Management	$18,870	$15,802	$16,777
Goal II - Impact Analysis	11,975	12,290	10,738
Goal III - Impact Mitigation and Development Planning	5,443	7,023	6,040
TOTAL	$36,288	$35,115	$33,555

Attached to this estimate of the amount expended by goal area during the reporting period is the status of funds progress report budget format called for in the grant. It shows the status of funds under this grant as of June 30, 1981. Supporting documentation for year to date expenditures is also attached.

FCRC
PROGRESS REPORT BUDGET FORMAT

June 30, 1981 (For Period Ending) | Utah MX Planning & Impact Mitigation (Project Title) | #6(MS)11-899-032-6 (FCRC Project No.)

Submitted to Four Corners Regional Commission

I. Cash Summary

Funds Beginning Reporting Period	FCRC Funds Received To Date	Applicant & Other Funds Received To Date	Less Disbursements	Equal Funds End of Period
$38,117	$300,000		$202,741	$97,259

II. Payments and Encumberances

CATEGORY LINE ITEM	APPROVED BUDGET FCRC Column 1	APPROVED BUDGET Applicant & Other Column 2	CURRENT PERIOD EXPENDITURES FCRC Column 3	CURRENT PERIOD EXPENDITURES Applicant & Other Column 4	YEAR TO DATE EXPENDITURES FCRC Column 5	YEAR TO DATE EXPENDITURES Applicant & Other Column 6	Percent Column 5 to 1 Column 7
Personal Services (List all Subcategories)	$210,120		$37,831		$64,901		30.9%
Travel (List all Subcategories)	38,400		6,031		12,504		32.6%
Equipment/Supplies/ Materials (List all Subcategories)	70,400		24,741		34,921		49.6%
Contract Services (List all Subcategories)	197,880		14,785		60,435		30.5%
Other Operating Expenses (List all Subcategories)	83,200		21,570		29,980		36.0%
TOTALS	$600,000		$104,958		$202,741		33.8%

Attach additional pages if necessary.

OPERATING STATEMENT (UNAUDITED)

		CURRENT PERIOD		YEAR-TO-DATE	
	CONSULTANTS				
431	Short-Term Services	.0 %	.00	.4-%	1,637.25
436	Other Consulting Service	.0 %	.00	.0 %	.00
	TOTAL CONSULTANTS	.0 %	.00	.4-%	1,637.25
	INTERAGENCY AGREEMENT				
439	Population Projections	6.6-%	10,000.00	3.2-%	13,000.00
440	Other Agency Services	.0 %	.00	.0 %	.00
441	Other Agency Travel	.5-%	798.00	.1-%	798.00
	TOTAL INTERAGENCY	7.1-%	10,798.00	3.4-%	13,798.00
	ADMINISTRATIVE CHARGE				
7	FCRC Administ. Charge	.0 %	.00	11.2-%	45,000.00
	TOTAL ADMIN. CHARGE	.0 %	.00	11.2-%	45,000.00
	TOTAL DIRECT COSTS	18.2-%	27,392.66	43.2-%	172,761.44
	GEN & ADMINISTRATIVE				
501	Salaries	1.1-%	1,773.96	1.4-%	5,838.40
502	Payroll Taxes	.0 %	50.47	.0 %	175.29
503	Health Insurance	.0 %	.00	.0 %	.00
504	Legal	.0 %	.00	.1-%	513.30
505	Accounting	.9-%	1,494.00	1.1-%	4,718.00
506	Insurance - General	.0 %	.00	.0 %	.00
507	Supplies	.0 %	.00	.0 %	.00
508	Repairs & Maintenance	.0 %	.00	.0 %	.00
509	Depreciation	.0 %	.00	.0 %	.00
510	Telephone	.0 %	.00	.0 %	.00
511	Taxes & Licenses	.0 %	.00	.0 %	.00
512	Dues & Subscriptions	.0 %	.00	.0 %	.00
513	Postage	.0 %	.00	.0 %	.00
514	Travel & Entertainment	.0 %	.00	.0 %	63.54
515	Rent	.0 %	.00	.0 %	.00
516	Utilities	.0 %	.00	.0 %	.00
517	Auto Expense	.0 %	104.99	.3-%	1,346.09
[illegible]	Amort - Leased Equip	.0 %	.00	.0 %	.00
[illegible]	Miscellaneous	.0 %	.00	.0 %	48.80
520	Interest MX	.0 %	.00	.0 %	.00
	TOTAL GEN & ADMIN	2.2-%	3,423.42	3.1-%	12,703.42
	OTHER (INCOME)EXPENSE				
555	Fees	1.8-%	2,739.27	4.3-%	17,276.15
556	Miscellaneous Expense	.0 %	.00	.0 %	.00
557	Miscellaneous Income	.0 %	.00	.0 %	.00
	TOTAL OTHER (INC)EXP	1.8-%	2,739.27	4.3-%	17,276.15
	TOTAL EXPEND. D O D #2	22.3-%	33,555.35	50.7-%	202,741.01

OPERATING STATEMENT (UNAUDITED)

		CURRENT PERIOD		YEAR-TO-DATE	
	REVENUE D O D #2				
301	D O D Contract #2	100.0 %	150,000.00-	75.0 %	300,000.00-
	TOTAL REVENUE	100.0 %	150,000.00-	75.0 %	300,000.00-
	CONTRACT COSTS MX				
	SALARIES & WAGES				
331	Project Director	2.6-%	4,000.00	5.0-%	20,000.00
332	Associate Director	1.8-%	2,750.00	3.5-%	14,200.00
333	Project Economist	1.4-%	2,167.00	2.8-%	11,401.50
334	Administrative Assistant	.0 %	.00	1.9-%	7,985.00
335	Office Salaries	.7-%	1,100.00	.5-%	2,377.24
336	Ecologist	.4-%	700.00	.1-%	700.00
	TOTAL SAL & WAGES	7.1-%	10,717.00	14.1-%	56,663.74
	PAYROLL TAXES & BENEF				
341	Payroll Taxes	.4-%	696.73	1.2-%	4,860.71
342	Health Insurance	.3-%	577.92	.8-%	3,376.60
	TOTAL P/R TAXES & BE	.8-%	1,274.65	2.0-%	8,237.31
	STAFF TRAVEL				
347	Air	.2-%	420.00	2.2-%	8,844.30
348	Ground	.0 %	56.49	.1-%	669.78
349	Lodging	.1-%	260.57	.7-%	2,989.73
	TOTAL STAFF TRAVEL	.4-%	737.06	3.1-%	12,503.81
	OFFICE EXPENSE				
411	Rent	.6-%	1,000.00	1.1-%	4,750.00
412	Utilities	.0 %	64.66	.2-%	914.01
413	Equipment Lease	.3-%	506.87	.7-%	2,974.35
414	Equipment Expense	.0 %	.00	.0 %	.00
415	Telephone - Regular	.3-%	494.80	.6-%	2,636.04
416	Telephone - L. D.	.2-%	379.60	.5-%	2,340.41
417	Postage	.3-%	500.00	.9-%	3,796.05
418	Copy Expense	.1 %	189.00-	1.3-%	5,430.00
419	Printing	.0 %	115.23	1.9-%	7,958.27
	Supplies	.5-%	768.69	.8-%	3,244.69
421	Maps & Reports	.0 %	121.83	.1-%	623.14
423	Janitorial	.0 %	36.00	.0 %	124.00
425	Registration Fees	.0 %	.00	.0 %	.00
428	Misc. Office Expense	.0 %	67.27	.0 %	125.37
	TOTAL OFFICE EXPENSE	2.5-%	3,865.95	8.7-%	34,921.33

ATTACHMENTS 1-11

ATTACHMENT 1

Meeting Minutes, Agendas, Attendance Lists and Handouts for

All Bi-State Meetings

MINUTES

Second Nevada/Utah Conference
on
MX Education Impacts and Mitigations

April 3, 1981

1. A list of those present is attached. In addition there was a significant number of observers/visitors who did not sign the roster.

2. Rowan Stutz explained why Superintendent Walter Talbot and Vaughn Hall could not be present and asked that they be excused.

3. After introductions Denise Lindberg, Utah State Office of Education, and Wendell Newman, Nevada Department of Education, shared the highlights of their respective written reviews of the DEIS from an education perspective. Utah's comments had been prepared by a single education review committee while Nevada used three sub-committees: Vocational Education, Higher education, and K-12 education.

4. The issue of the demand for technically trained manpower was raised by both of the DEIS reviews. Bill Trabert, Nevada Department of Education, and Bob Worthington, Utah System of Higher Education were asked to form a special task force to look into the projected needs for trained manpower, survey the extant capability for meeting these needs and recommend what else needs to be done to put Nevada and Utah into a position to respond appropriately to future demands for vocational/technical training at the high school and post high school levels.

   Funds for the support of the work of this task force will be sought from each of the state MX coordinator offices.

   A progress report of the work of this task force will be made at the next meeting.

5. John Roach, Assistant Project Manager, MX Coordinator's Office, Utah, presented an overview of tiered decision making as it is being employed in making the MX basing and development decisions. He pointed out the DEIS was prepared only to facilitate the deployment area selection and land withdrawal/acquisition decisions. This partially explains the lack of specificity and detail regarding education impacts and mitigations.

6. Phil Robison from the local MX Policy Board, told about the work of his group to date. He also presented the Impact Assistance Program that had been prepared jointly by Nevada and Utah, which proposes that MX mitigation funds be appropriated as a block grant to each state and managed by an MX Grant Review Committee in each state.

7. The significance of the impact of MX upon the quality of life in the communities near the deployment site and the concomitant effects upon education were discussed at length. It was felt that educators had a responsibility to help communities prepare for and hopefully head-off the social dislocations and alienations that usually accompany rapid growth in small communities.

David Lundberg, University of Nevada, who has written a paper on this problem, agreed to share his paper and his thoughts about how to deal with this problem with the group at the June meeting.

8. The next meeting was set for June 12 and will probably be held in Las Vegas. Nevada will host the next meeting. Several items for the June meeting agenda were suggested to Wendell Newman,

It was agreed that the pattern of alternating the responsibility for hosting these joint meetings would continue and that in the future the host state would arrange for someone to record the minutes.

April 3, 1981

ROSTER

NAME	STATE	POSITION AND ADDRESS
Wendell Newman	Nevada	Department of Education
Russ McOmber	Nevada	White Pine Co., Supt. P.O. Box 400 E., Ely
Leon Hensley	Utah	Lander Co. School Dist. Supt. P.O. Box 273, Battle Mountain, Nev.
Robert M. Worthington	Utah	St. Board of Regents, 807 E. So. Temple, Salt Lake City
Denise P. Lindberg	Utah	State Office of Education 250 East 5th South, Salt Lake City
Fred Openshaw	Utah	Tintic School District Eureka, Utah
J. Clair Morris	Utah	Superintendent, Iron County
M. Clark Newell	Utah	Superintendent Juab School District, 305 E. 100 No. Nephi, Utah
Sherm D. Ferre	Utah	Clerk-Treasurer, Juab School Dist. 305 E. 100 North, Nephi, Utah
Jack Burr	Utah	Supt. Washington County Schools 189 West Tabernacle St. George, Utah
Glen W. Moyle	Nevada	P. O. Box 24, Eureka, Nevada
Earle Nuttall	Nevada	P.O. Box 116. Eureka. Nevada
Charles P. Lloyd	Utah	Administrator, Educa. Support Services, Utah State Office of Education 250 E. 500 So,, Salt Lake City
Scott W. Bean	Utah	Utah State Office of Education 250 E. 500 So., Salt Lake City
Harold Hiskey	Utah	Dean of Business & Techn. So. Utah State College Cedar City, Utah
John Roach	Utah	Assist. Project Mgr. MX Coord. Office, Salt Lake City
Thurman White	Nevada	Associate Supt. 2832 E. Flamingo

NAME	STATE	*POSITION AND ADDRESS
Ted Sanders	Nevada	Department of Education 400 W. King St. Carson City,
Rowan Stutz	Utah	Utah State Office of Education 250 E. 500 So. Salt Lake City, Utah
Warren Holmes	Nevada	State Board of Education, President
Kent Myers	Utah	67 No. 1050 W., Cedar City, Utah
Ken Topham	Utah	Superintendent, Millard School Dist. Box 666, Delta, Utah
Leo Prestwich	Nevada	Lincoln Co. Schools, Box 118 Panaca, Nevada
David Lundberg	Nevada	Research & Educa. Planning Center Rm. 201 College of Education University of Nevada, Reno, Nevada
Kent Hulet	Utah	Director of Elem/Sec. Education P.O. Box 879, Cedar City, Utah
Clarke N. Johnsen	Utah	Superintendent, Tooele Co. Sch. Dist. 66 West Vine Street Tooele, Utah

MAY 26 1981

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D C. 20301

MAY 21 1981

MANPOWER,
RESERVE AFFAIRS
AND LOGISTICS

MEMORANDUM FOR THE INTERGOVERNMENTAL/INTERAGENCY TASK FORCE
ON COMMUNITY IMPACT ASSISTANCE

SUBJECT: Conclusion from May 19th Task Force Meeting

Attached are the revised Findings and the updated draft legislation for Special Impact Assistance, which reflect the guidance provided by the Task Force on May 19th.

Following our meeting with the Urban Institute on May 20th, it was found that the number of research tasks to be compiled and edited would really only permit a distribution date for the Draft Final Report of June 2nd. A revised Schedule for Completion of the Section 803 Report is therefore attached which calls for agency-state-local comments to be furnished to OMB by June 10th and the Final Report to be forwarded to OMB on June 17th.

We very much appreciate the hard work which the Task Force members have given to this effort and the goodwill which has been so evident in reaching a consensus on the adjustment assistance needs for Defense growth impacted communities.

Robert M. Rauner
Acting Director
Office of Economic Adjustment

Attachments

FINDINGS

This Final Report on Community Impact Assistance for Defense Growth Areas is submitted in accordance with Section 803 of the FY 1981 Military Construction Authorization Act (P.L. 96-418). The following findings are for the purpose of determining the most effective and practicable means of promptly mitigating the adverse impact on communities with major, new military facilities:

1. The history of impact assistance since World War II indicates that communities and states seriously affected by extraordinary Defense growth have not been required to bear the full burden of municipal facility and service costs associated with the establishment of major, new Defense bases. Supplemental federal assistance has been available as the prevailing norm to assist Defense growth-impacted areas.

2. The local economic stimulus from military bases (in contrast with DoD industrial activities) is lower in general than from other private sector activities as a result of: (a) lack of normal inter-industry relationships between the base and regional industry; (b) the base itself providing a large portion of the secondary employees in the local economy; and (c) the generally lower wage scale for military personnel in comparison with prevailing local wages. Given the lack of local-state taxing authority on military base facilities and on commissary-post exchange sales, the economic incentives from a major, new military base often are not sufficient to meet the early up-front requirements for public infrastructure and may not be sufficient even to meet the full annual incremental operating costs required to support the new military base activities.

3. Local and state resources and normal Federal domestic agency assistance should be used to provide public facilities and services supporting nearby military bases and Defense activities in all but those exceptional circumstances where the sudden population influx and the resulting demand for public services could overwhelm local-state fiscal capacities and impede the Defense expansion and national security objectives. In these exceptional circumstances, the Department of Defense should be prepared to provide limited initial supplemental or special assistance until local and state budgets and normal Federal domestic agency assistance can adequately address the problems associated with the growth. Previous experience suggests that the growth impact problems are the most serious for communities with less than 5,000 population which are growing at a rate of more than five to seven percent annually. The effects of rapid population growth on communities with populations ranging from 5,000 to 200,000 persons can also be serious. Larger communities generally are able to attract the regional economic stimulus from new Defense base activities and are far better prepared to accommodate the demands for additional public services. In general, special Federal assistance should only be warranted in those unusual circumstances where the lack of adequate public facilities would otherwise impede national security objectives.

4. In view of the limitations in local planning resources available through the domestic agencies, one of the most helpful steps toward mitigating growth impacts would be to seek the authority for DoD community planning assistance resources. This step would encourage needed local planning for growth impacts and the preparation of the appropriate grant applications -- irrespective of the final budgeting sources for adjustment resources.

5. Most current federal assistance programs are directed toward communities with existing economic distress or on-going urban problems more than toward communities facing major growth pressures. Many federal programs are based on distribution formulas through the states; other federal formula grant programs do not highlight growth adjustment needs as a competitive criterion. Without supplemental resources, it is difficult to assure community assistance to growth impacted communities affected by major, new military bases -- even when these communities are provided priority consideration by the domestic federal agencies.

6. Twelve alternative organizational and budgeting approaches for community impact assistance were examined in relation to fourteen desirable characteristics for an optimum impact assistance program in behalf of Defense growth areas. There was no single approach to the Defense growth impact assistance problem, which is--simple, easily managed, and fully responsive locally. Five of the alternative organizational and budgeting approaches, however, satisfied more than 60 percent of the fourteen desirable characteristics of the optimum community assistance program: (a) the budgeting of community assistance within a single domestic agency; (b) supplemental DoD community impact assistance (i.e., Trident-West Coast Section 608 or the more recent Section 802 program); (c) an Impact Mitigation Trust Fund proposed by the States of Nevada and Utah; (d) DoD Block Grant Assistance as also proposed and preferred by the States of Nevada and Utah; and (e) Special Impact Assistance for supporting Defense base expansions and national objectives with defined local flexibility. Preference among the more evident alternatives will be shaped in this regard by the degree that the responsibility for national resources can be delegated to state-local entities in order to achieve a greater capacity of local responsiveness -- while at the same time fulfilling national objectives and maintaining accountability for national resources.

7. States and local government should also be encouraged to meet their share of public facility costs. The provisions of Section 802(b)(1) of P.L. 96-418, which authorizes the Secretary of Defense to "guarantee State or municipal indebtedness for improved public facilities related to the MX Weapon System or the East Coast Trident Base," had been unclear as to whether the guarantee should apply to federal tax-free local indebtedness or local indebtedness where the interest is taxable for federal income tax purposes. In forwarding the Preliminary Report to Congress, the President clarified this issue by emphasizing that the Administration "would oppose any such assistance taking the form of Federal guarantees of State or municipal indebtedness where the interest is not subject to Federal income tax." A less costly approach for the Federal government involves DoD supplementing the interest difference between taxable and tax-free notes over the life of the municipal bonds.

Working draft candidate alternative approach to be included in the Section 803 Report.

SPECIAL IMPACT ASSISTANCE

Sec. ____. (a) The Secretary of Defense, or his designee, (hereafter referred to as the Secretary) is authorized to provide special impact assistance, as outlined in subsection (b) below, to States, territories, Indian tribes, local governments, or duly recognized associations or authorities of local or State governments from monies appropriated to the Department of Defense for that purpose. Funds appropriated and commitments authorized specifically for Special Impact Assistance shall be used in conjunction with on-going domestic agency programs, wherever possible, to avoid an unfair and excessive financial burden of providing increased public facilities or services in the immediate vicinity of, and directly attributable to, the major construction or expansion of military facilities. Pursuant to subsection (d), such funds and commitments shall be made available only in those exceptional circumstances where Federal agency programs are inadequate either in amount or purpose, as determined by the Director of the Office of Management and Budget, and normal State and local resources are inadequate to support national security requirements.

(b) Special impact assistance authorized by this section may include (1) providing direct grant assistance, (2) helping communities or States meet their share of costs under existing Federal agency programs, (3) guaranteeing State or municipal indebtedness only where the interest income from such indebtedness is included in gross income for the purposes of Chapter 1 of the Internal Revenue Code of 1954, as amended, and (4) subsidizing interest payments on obligations held by the United States, commercial, or State bonding institutions.

(c) Special impact assistance authorized by this section shall be made available and administered in accordance with (1) regulations promulgated by the Secretary, (2) the annual community impact facilities and services program (hereinafter referred to as the Program) which shall be specific by project or activity and approved by the Secretary, and (3) the multi-year community impact facilities and services plan. Such Program and the multi-year plan shall be locally prepared and submitted by a duly constituted intergovernmental Defense impact planning and mitigation board (hereinafter referred to as the Board), composed as appropriate of State, local, and advisory Federal members. The chairman, as authorized by the Board, shall submit implementing procedures and regulations for planning and programming, including regional or State performance and cost standards that are compatible with Department of Defense regulations. The Program and the implementing procedures and regulations shall be submitted to the Secretary who may approve the submissions in whole or in part or may disapprove the submissions and require their resubmission. Such approval shall be based upon a determination that the Program: (1) is consistent with the multi-year plan, (2) meets the public facility and services needs of the military departments responsible for the Defense construction or expansion, (3) demonstrates that the public facilities and services are needed as a result of anticipated Defense-related growth, (4) avoids an unfair and excessive financial burden to State and local governments, and (5) is in compliance with the applicable regulations set forth by the Secretary. The Secretary shall submit his approved Program in support of the President's annual budget request to the Congress.

(d) The Secretary, in consultation with the heads of the other appropriate Federal agencies and elected officials of impacted jurisdictions, shall within 120 days of the enactment of this Act publish (1) standards for initiating special impact

assistance, and (2) regulations governing the administration of special impact assistance, such regulations among other things to include the planning process standards and requirements for multi-year comprehensive plans and programs.

(e) The Secretary shall (1) keep the appropriate Committees of Congress informed of major changes to the Program made pursuant to regulations promulgated by the Secretary, (2) submit an annual schedule of program and financial audits and reports, and (3) shall submit annual reports to the appropriate Committees of Congress indicating the total amounts transferred to and the amounts obligated and expended by each recipient of special impact assistance provided under the authority of this section.

(f) Grant assistance to eligible recipients shall be made available through a duly designated fiscal agent upon certification that such funds (1) will be used in accordance with the approved Program, (2) are required for obligation within the following twelve months, and (3) will be used in accordance with applicable State, local, and Federal regulations.

(g) Subject to regulations promulgated by the Secretary, the Board may approve reprogramming and cost variations for projects in the approved Program and establish and administer a minor project and activities account.

(h) The Secretary shall determine when there is no longer an unfair and excessive financial burden to the impact jurisdiction by Department of Defense activities. The Secretary of Defense shall also determine when the major construction or expansion of military facilities has been physically completed. No new Special

Impact Assistance may be provided after two years thereafter unless the Secretary of Defense, in consultation with the Director of the Office of Management and Budget, determines on a biennial basis that an unfair and excessive financial burden still exists.

(i) For the purpose of this section, (1) "unfair and excessive financial burden" means the net fiscal deficit imposed on an affected jurisdiction by the difference between the incremental capital or operating costs required to support national security requirements and the increases in public tax revenue and bonding capacities derived from the regional spending resulting from the Defense expansion or new construction -- based on equitable local and state taxing efforts and the good faith allocation of normal domestic Federal agency and state assistance to the impacted jurisdiction. (2) "fiscal agent" means an officially designated financial administration, accounting and auditing activity for the impacted area in behalf of the Board. (3) "Defense-related growth" means the direct or secondary population, employment or economic activities attracted to or induced into the immediate vicinity of and directly attributable to the major construction or expansion of military facilities; specifically, those activities which would not otherwise exist in the area without the Defense construction or base expansion and (4) "comprehensive plans" mean the appropriate elements of the documentation described in 42 U.S.C. 4201 (9) and elements required to be addressed under the applicable provisions of state statutes and regulations pertaining to planning and the preparation of comprehensive plans.

(j) Section 802 of the Military Construction Authorization Act, 1981 (Public Law No. 96-418; 94 Stat. 1777) is hereby repealed.

SCHEDULE FOR COMPLETION OF 803 FINAL REPORT

19 May 1981	Last Meeting to Review Drafts
2 June	Mail to TF Members the Draft Final Report (Less Educational Costs, Chapter 1)
10 June	TF Members Submit Comments to OMB
17 June	Final Report to OMB

UTAH MX COORDINATION OFFICE

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Utah MX Energy Working Group

FROM: Utah MX Coordination Office

DATE: June 10, 1981

SUBJECT: Transmission Coordinating Committee Meeting

On May 28, 1981, the second Transmission Coordinating Committee meeting was held in the Riviera Hotel in Las Vegas, Nevada. A copy of the agenda and handouts are attached. An attendance list was taken by the Air Force, but I did not obtain a copy of it. Representatives of the Utah/Nevada utilities, the Air Force, the Corps of Engineers (COE), the Bureau of Land Management (BLM) and the State of Utah were present. The discussion is summarized below.

Lt. Col. Joe Ornowski opened the meeting with introductions. He then talked about the Air Force selection of a consultant (EDAW, Inc.) to do base comprehensive planning, and the generic studies they are conducting at four candidate main operating base (MOB) sites: Coyote Springs, Nevada; Beryl and Milford, Utah; and Clovis, New Mexico. He also briefly discussed the latest rumors in MX basing. The Secretary of Defense has stopped the award of all new contracts and the amendment/modification of existing contracts until presidential decisions on the basing mode and deployment area(s) are made. This will be at least a 60-day holding period.

Marlo Rudningen began with a discussion of agenda item (2) and handout 1. A question was raised regarding backfill and the Air Force indicated that the estimated electrical loads incorporate backfill (i.e., 4600 shelters plus 2300 backfill shelters).

Another question was raised about the power loads of Utah communities; the loads are combined with the UP&L loads. The electrical load estimates do not reflect the EDAW work on the base comprehensive plan, although the Flack and Kurtz work, for Martin-Marietta, is incorporated.

The inclusion of 2300 backfill shelters for 1992 design does not include additional operations and maintenance load (O & M) requirements. The AFRCE said the O & M load requirements are negligible.

The Task Force was the basis of the summary manpower estimates shown. These are people directly connected with the system. The loads are for a Coyote MOB and

and Milford secondary OB (i.e., the preferred scenario from the MX DEIS). The peak loads have been dampened.

The figures do not include cement batch plants. There will be six plants, and each will be located at three different sites (for a total of 18 batch plant sites).

The Milford OB load is estimated to be 21 MW. The indirect loads have not been included because the latest Task Force manpower estimates were for direct construction, Corps of Engineers and life support system workers only. Henningson, Durham and Richardson (HDR) is utilizing the Task Force estimates of direct employment to calculate indirect employment estimates. These figures should be available at the end of June.

The 2 kW per capita use figure was questioned (as it was at the previous Committee meeting). The validation needs to be unequivocal. The Air Force said that the figure is dependent on the life support system ultimately chosen.

The loads of the two uncertificated areas are combined.

The utilities reiterated that at the previous meeting they had requested that stability studies be included in the Corps of Engineers' long lead electrical study scope of work (see handout 2); these studies are obviously dependent on the system being proposed. The conditions that ought to be studied include the base case, and system faults and their location. The COE said they are at the end of their negotiations with the consultant (Gilbert Commonwealth); as mentioned earlier, they (like the Air Force) are in a holding pattern with regard to the award of contracts.

John Arlidge (the utilities representative) then raised several issues about the May 4, 1981 letter (see handout 3). The utilities general comments are:

1. What are the annual loads by valley/cluster?
2. Where are the loads?
3. What are the voltages and their location?
4. How does the Air Force want to be served?

The utilities were asked to provide the Air Force with various information. In order to fully comply with the request, the utilities must obtain the loads by area, the voltages to be served and their locations. The utilities will do parallel studies with the COE and their consultant. Further, utilities have allied themselves (letter of April 29, 1981) and have agreed on the title: MX Bi-State Power Coordinating Council.

Specific comments are as follows:

1. Utilities has 7.2 kV lines which do not include proposed transmission lines.
2. There are three in the area: the Intermountain Power Project, Allen-Warner Valley, and the Anaconda Transmission Line in northwestern Nevada, as well as various environmental assessments which should be obtained from the Bureau of Land Management (BLM).
3. This is dependent on the contract negotiated at that point in time. The commitment to the Air Force load requirements was reiterated. The Air Force's problem will be in getting the route approved, and not getting the cooperation of the utilities. The general utility practice is tenancy

in-common or single ownership with entitlements. Again, the utilities must know what the Air Force needs and where (i.e., a physical map of the load requirements by site and the voltage the load is to be serviced at).

4. This varies by utility and is subject to geographic terrain. It is dependent on the general geography of the area. The utilities can give the Air Force general system standards. Utilities will make the design standards available, where they exist. The public service/utilities commissions require submission of all feasible designs, as well as the most cost-effective, and the recommended design.

At this point, it became apparent that the utilities and the Air Force continue to have a basic philosophical difference. Outsider designs are not condoned or tolerated by the utilities.

5. PURPA findings will be made available where they exist.

6. The utilities need site-specific information in order to answer this point. However, all existing substations are fully dedicated. All facilities already there are being used. Microwave communication will be difficult due to saturation; the Air Force will have to supply frequencies to the utilities (i.e., so that the Air Force and the utilities can communicate with each other). Obviously, inter-utilities communications is the responsibility of the utilities.

7. The utilities indicated that the pull-up-and-down costs for temporary facilities could be steep. A cost/benefit analysis for temporary utilities transmission system versus using diesel generators should be conducted. A question was raised by the utilities about whether the land withdrawal application would include lands for utility interconnections outside the system. If not, it was suggested that this should be included in the land withdrawal application if the Air Force wants the power in a timely manner.

8. Nevada Power Company

9. Two to ten years. The adequacy of the MX DEIS alternatives was questioned and dismissed by the Air Force. The utilities said they would not construct for excess capacity or backfill, but would design for it if the Air Force foots the bill.

10. Utilities will provide the available data to the Air Force.

The Air Force and utilities share a problem of lack of decisions and direction. Further, the Air Force has a problem with funding at the present time. The Air Force wants an independent contractor to verify that the utilities are correct. It was recognized that a joint effort between the Air Force and the utilities with early planning and cooperation is necessary, particularly to devise the most reliable, cost-effective system that the utilities can operate. The Air Force is committed to providing as much data as possible to the utilities for preliminary planning. Funding is a problem, although it will be explored for the future. The Air Force is concerned about parallel planning efforts that are not compatible and must be resolved. The utilities' approach must be examined.

The utilities want loads (timing and location) and voltages. The AFRCE said that the voltage from distribution centers to the clusters is 24.9 kV, and is a single phase 14.4 kV at each shelter, which is an odd voltage which could cause equipment problems. The question was raised about the voltages needed at the operating bases.

The Air Force said the construction management plan deals only with the deployment of the weapon system. The FY 83 Utah construction is: Pine, Wah Wah, Hamlin, Whirlwind and Sevier Desert Valleys; FY 84 Utah construction is: Snake Valley; and FY 85 Utah construction is: Fish Springs Flat, Dugway and Tule Valleys. The Air Force said they would provide copies of the construction sequence maps.

A question was raised about the construction power estimates. The Air Force said the numbers are subject to change because of the many variable parameters.

The Air Force asked about the availability and feasibility of the utilities supplying temporary power for construction and where this would be located. The three affected utilities have looked at Coyote Springs; they must discuss and more accurately define the possibilities. The existing power line from Las Vegas to Pioche has a capacity of 20 MW and a current use of about 13 MW. The operating base site is in an uncertificated area. It would take about two years to supply the power, assuming it is totally from Reid Gardner and transmitted over 138 kV or 345 kV lines. Nevada Power Company said it thinks it can service the FY 82-83 loads (this is probably, not surely). Nevada Power Company can supply the total operating base power loads depending on when this is needed.

UP&L said it thinks it can supply the FY 84 power load at Milford, but is not sure if the FY 85 power will be available. Also, their service area probably only encompasses the north Milford site within the vicinity zone. Also, it was pointed out that the MOB actually refers to the base proper, an airfield and attendant facilities, a designated assembly area, an operational base test site and a storage depot.

Dixie-Escalante was not represented to answer the question for the remaining Milford and the Beryl sites.

The Air Force wants the utilities to provide verification of the availability/feasibility of supplying temporary power to the MOB, and the dollar cost to the Air Force for doing so.

The utilities said the Air Force would pay both the cost of constructing facilities and the incremental cost of providing power, since the published rate schedules are not applicable. This is due to the unique nature of the MX "business" and the extensive line extensions.

The MX Bi-State Coordinating Council has a Memorandum of Agreement (not a contract forming a single entity) which cites objectives and appoints the Nevada Power Company as utility/Air Force liaison. Participants (or members) are those utilities directly affected by MX deployment; they have voting rights and sign-off privileges. Indirectly-affected utilities can initial agreements only as indirectly-impacted parties.

PROPOSED AGENDA

LONG LEAD ELECTRICAL STUDY SUMMARY

MX ELECTRICAL LOADS

(1) AF REQUIREMENTS AND CRITERIA

(2) UTILITY COMPANIES REQUIREMENTS

(3) SCHEDULING

Atch 1

GROUND RULES AND ASSUMPTIONS

- DESIGN TRANSMISSION FOR BACKFILL (6900 SHELTERS). UTILIZATION BASED ON 4600 SHELTERS.
- NO ADDITIONAL IN-MIGRATION FOR BACKFILL.
- ALL OPERATIONAL LOADS ASSUMED TO BE MINIMUM P.F. OF 0.8.
- SHELTER LOAD BASED ON CURRENT ESTIMATES PLUS ALLOWANCES FOR PLU AND OTHER LOAD GROWTH.
- TACTICAL LOAD DIVERSITY ASSUMED TO BE 1.25.
- NONTACTICAL LOAD DIVERSITY ASSUMED TO BE 1.5.
- COMMUNITY POWER SYSTEMS IN SW UTAH (ST. GEORGE, CEDAR CITY ETC.) COMBINED WITH UTAH POWER & LIGHT.
- OB/DAA ASSUMED TO BE SERVED BY NEVADA POWER COMPANY.
- LOADS FOR NONTACTICAL ARE BASED ON 2 KW PER CAPITA AND IS ASSUMED TO BE DIVERSIFIED NUMBER.
- BASE SIZE PER SAC INPUT OF 11-14-80.
- DAA/OB/OBTS LOADS FROM MMC EPS 5-13-81.
- EIGHTY PERCENT MILITARY OPERATIONS (PERSONNEL & DEPENDENTS) HOUSED ON BASE.
- BASE LOADS INCLUDE ELECTRIC COOLING. HEATING ASSUMED TO BE FUEL OIL/NATURAL GAS.

MX TACTICAL & NONTACTICAL TOTAL ELECTRICAL LOADS

MX POWER SYSTEM	YEAR-FUNCTION	TOTAL LOADS (MW)	
		PEAK DEMAND	TOTAL USE MWH
TACTICAL LOAD SUMMARY	1992 DESIGN	178.7	N/A
TACTICAL LOAD SUMMARY	1992 UTILIZATION	138.2	1,157,844
TATICAL LOAD SUMMARY	1987 UTILIZATION	79.4	642,056

(1) MAXIMUM UTILIZATION TO BE MET THRU COMBINATION OF COMMERCIAL SOURCES AND ON-SITE GENERATION.

TACTICAL LOAD - 1992 DESIGN

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUAL US MWH
SHELTERS	6900	22	27	N/A	151.8	186.3	N/A
CMF (UNMANNED)	194	7	220		1.4	42	
(MANNED)	6	140	220		0.8	2	
ASC	4	800	1,400		3.2	5.6	
DAA	1	10.820	17.870		10.8	17.9	
OBTS	1	1,796	3.321		1.8	3.3	
OB # 1	1	32,200	40,580		32.2	40.6	
OB # 2	1	21.365	30,521		21.4	30.5	
TOTALS					178.7 (1)	328.2	

(1) PEAK LOADS NOT ADDITIVE DUE TO DIVERSITY. ASSUMED TO BE 1.25.

TACTICAL LOAD - 1992 UTILIZATION

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUAL USE MWH
SHELTERS	4600	22	27	0.8	101.2	124.2	709,210
CMF (UNMANNED)	194	7	220		1.4	42	9.811
(MANNED)	6	140	220		0.8	2	5,606
ASC	4	800	1,400		3.2	5.6	22,426
DAA	1	10.820	17,870	0.33	10.8	17.9	31,220
OBTS	1		3,320	0.25	1.8	3.3	3,942
OB # 1	1	32,200	40,580	0.8	32.2	40.6	225.758
OB # 2	1	21,365	30.521	0.8	21.4	30.5	149.971
TOTALS					138.2 (1)	266.1	1,157,844

(1) PEAK DEMANDS NOT ADDITIVE DUE TO DIVERSITY, ASSUMED TO BE 1.25.

TACTICAL LOAD - 1987 UTILIZATION

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUAL USE MWH
SHELTERS	2300	22	27	0.8	50.6	62.1	354,605
CMF (UNMANNED)	230	7	220		1.6	50.6	11,213
(MANNED)	4	140	220		0.6	0.9	4,205
ASC	2	800	1,400		1.6	2.8	11,213
DAA	1	10,820	17,870	0.33	10.8	17.9	31,220
OBTS	1	1,796	3,320	0.25	1.8	3.3	3,942
OB # 1	1	32,200	40,580	0.8	32.2	40.6	225.759
TOTALS					79.4(1)	178.2	642,056

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(1) PEAK DEMANDS NOT ADDITIVE DUE TO DIVERSITY, ASSUMED TO BE 1.25.

Head count appropriate portion of MX Fast-Comp. Scenario

NEVADA/UTAH

SUMMARY ESTIMATED MANPOWER BY FRANCHISE AREA

26 MAY 1981 Page 1

	82	83	84	85	86	87	88	89	90
NEVADA POWER COMPANY									
OPERATIONS		39	234	2611	5677	7722	7722	7730	7730
CONSTR/COE	1392	2936	2762	2618	1565	1065	1052		
A&CO	50	200	500	900	1250	1250	1250	1250	250
TOTALS	1442	3175	3496	6129	8492	10024	8970	8980	7980
LINCOLN COUNTY POWER DIST									
OPERATIONS									
CONSTR/COE	304	1259	2809	5351	3675	615	214		
A&CO	10	100	222	1179	2071	985	329		
TOTALS	314	1359	3031	6560	5746	1600	543		
MT WHEELER POWER									
OPERATIONS									
CONSTR/COE	98	408	1155	1960	3727	4537	4286	2880	
A&CO			19	19	608	1092	1330	1916	52
TOTALS	98	408	1174	1979	4335	5629	6116	4796	52

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	82	83	84	85	86	87	88	89	90
SIERRA PACIFIC POWER CO									
OPERATIONS									
CONSTR/COE			419	1504	3677	6424	4203	1300	
A&CO				18	121	826	1711	1389	6
TOTALS			419	1522	3798	7250	5914	2689	6
UTAH POWER & LIGHT									
OPERATIONS				31	246	1946	4497	5600	560
CONSTR/COE	238	987	2364	6388	5483	4031	1876	498	
A&CO			60	160	1183	1438	638	450	25
TOTALS	238	987	2424	6548	6666	7415	7011	6548	562
UNCERTIFIED AREAS									
CONSTR/COE				96	441	1067	1685	830	
A&CO					17	25	444	535	26
TOTALS				96	458	1092	2129	1365	26
A&CO & COE - LAS VEGAS	250	500	600	300	200	200	200	200	10
A&CO & COE - SALT LAKE CITY	250	500	600	300	200	200	200	200	10

ELECTRICAL LOADS (MW)
POWER DISTRICT SUMMARY

	82	83	84	85	86	87	88	89	90
NEVADA POWER COMPANY									
OPERATIONS		1.6	8.2	18.2	25.5	29.8	32.7	32.8	32.8
CONSTR/COE/A&CO	2.8	6.3	6.5	7.0	5.6	4.6	2.5	2.5	.5
TOTALS	2.8	7.9	14.7	25.2	31.1	34.4	35.2	35.3	33.3
LINCOLN COUNTY POWER DIST									
OPERATIONS				5.	15.8	15.8	18.4	18.4	18.4
CONSTR/COE/A&CO	.6	2.7	6.1	13.1	11.5	3.2	1.1		
TOTALS	.6	2.7	6.1	18.1	27.3	19.0	19.5	18.4	18.4
MT WHEELER POWER									
OPERATIONS					5.1	11.1	14.1	23.0	23.0
CONSTR/COE/A&CO	.2	.8	2.4	4.0	8.7	11.3	12.2	9.6	.1
TOTALS	.2	.8	2.4	4.0	13.8	22.4	26.3	32.6	23.1
SIERRA PACIFIC POWER									
OPERATIONS					1.4	3.8	12.8	22.8	22.8
CONSTR/COE/A&CO			.8	3.0	7.6	14.5	11.8	5.4	.05
TOTALS			.8	3.0	9.0	18.2	24.6	28.2	22.85
UTAH POWER & LIGHT									
OPERATIONS				3	12.5	21.8	29.6	35.1	35.1
CONSTR/COE/A&CO	.5	2.0	4.8	13.1	13.3	10.9	5.0	1.9	.05
TOTALS	.5	2.0	4.8	16.1	25.8	32.7	34.6	37.0	35.15

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OPERATIONS - PEOPLE + BASE
CONSTRUCTION - PEOPLE ONLY 3KW/PERSON
... INDUCED DEVELOPMENT LOADS ETC

ELECTRICAL LOADS (MW)
POWER DISTRICT SUMMARY

	82	83	84	85	86	87	88	89	90
UNCERTIFIED AREAS									
OPERATIONS							4.6	6.1	6.3
CONSTR/COE/A&CO				.2	.9	2.2	4.3	2.7	.6
TOTALS				.2	.9	2.2	8.9	8.8	6.9

OPERATIONS (MW) (POWER DIST) 26 MAY 1981

	82	83	84	85	86	87	88	89	90
SIERRA PACIFIC POWER					1.4	3.8	12.8	22.8	22.
MT WHEELER POWER					5.1	11.1	14.1	23.0	23.
LINCOLN CO POWER DIST				5.0	15.8	15.8	18.4	18.4	18.
NEVADA POWER CO		1.6	8.2	18.2	25.5	29.8	32.7	32.8	32.
UNCERTIFICATED							4.6	6.1	6.
UTAH POWER & LIGHT				3.0	12.5	21.8	29.6	35.1	35.
TOTALS		1.6	8.2	26.2	60.3	82.3	112.2	138.2	138.

ELECTRIC LOADS (MW) CONST/COE/A&CO 26 MAY 1981

	82	83	84	85	86	87	88	89	90
SIERRA PACIFIC POWER			.8	3.0	7.6	14.5	11.8	5.4	.05
MT WHEELER.POWER	.2	.8	2.4	4.0	8.7	11.3	12.2	9.6	.1
LINCOLN CO. POWER DIST	.5	2.7	6.1	13.1	11.5	3.2	1.1		
NEVADA POWER CO	2.8	6.3	6.5	7.0	5.6	4.6	2.5	2.5	.5
UNCERTIFICATED (HECMRA)				.2	.9	2.2	4.3	2.7	.05
UTAH POWER & LIGHT	.5	2.0	4.8	13.1	13.3	10.9	5.0	1.9	
TOTALS	4.1	11.8	20.6	40.3	47.6	46.7	36.9	22.1	.7

ELECTRIC LOADS (MW) (IN-TOWN) 26 MAY 1981

	82	83	84	85	86	87	88	89	90	91	92
SIERRA PACIFIC POWER							.1	1.8	.8		
MT WHEELER POWER						1.0	.6	.1	.1		
LINCOLN POWER DIST.					.1	.1	.1	1.1	.8	.7	.7
NEVADA POWER CO.			4.8	20.8	33.4	27.6	20.5	5.8	5.8	5.8	5.8
OVERTON POWER DIST #5			.5	2.3	3.7	3.1	2.3	.6	.6	.6	.6
UTAH POWER & LIGHT			1.7	4.6	26.9	36.6	31.6	18.0	13.5	10.1	10.1
ESCALANTE VALLEY ELEC ASSOC.											
			7.0	27.7	64.1	68.4	55.2	27.4	21.6	17.2	17.2

1. Preliminary Summary for Long Lead Electrical.

2. General Background. The overall goal of this project is to provide a plan that constitutes the framework for programming, design and construction execution in support of the total electrical power transmission system for the MX missile program in the southwestern region of the United States. The study shall address various alternatives and schemes, identify long lead electrical equipment for the transmission system and shall include studies and analysis in order to recommend an optimum transmission system for the Air Force's selected basing mode. Early on submittals shall include recommendations for providing power to those facilities in support of Initial Operating Capability (IOC) and a list of related long lead procurement items. This Statement of Work will define the work and services to be performed, contractual options (attachments) and will serve as a basis for arriving at an A-E contract.

3. Work and Services. The work and services to be performed by the A-E shall be for the following items (No on-site field work will be required):

a. Concept Study.

(1) Preliminary Concept Study.

(a) A preliminary concept study shall be prepared during Phase A in sufficient detail to define the electrical transmission system for up to 3 basing alternatives on options exercised by the Government as defined in paragraph 3b. Three transmission schemes shall be evaluated and ranked in recommended order of preference. The study effort shall be based on tasks 3a(2) A thru K to the extent necessary to support realistic comparisons. The submittal shall include but not be limited to narrative descriptions, drawings, sketches, calculations, and cost estimates as described in paragraph 4 necessary to support a decision as to the preferred scheme. The cost estimates for selection shall include the annual cost of maintenance converted to present worth, capitalized, and combined with the first cost for each of the 3 schemes to determine the most economical alternatives. The A-E shall consider the following 3 schemes:

i. A scheme that meets only the minimum MX power requirements IAW. Air Force Criteria, and local, State and Federal codes.

ii. A scheme that considers joint venture with local utility companies and IAW Air Force criteria and minimum standard utility company requirements.

iii. A scheme considering separate power lines form local utility systems to some facilities and power supplied to the other facilities by joint venture lines and meeting minimum Air Force criteria.

Each scheme shall identify means of providing permanent power, and temporary power if required, to those facilities in support of Initial Operating Capability (IOC). Provide recommended routings, voltage levels, and type of construction (OH vs U.G.).

(b) Provide a preliminary list of long lead procurement items (IOC) as required for the proposed first construction phase. The list shall be of such detail as to permit the initiation of contract negotiations to develop procurement specifications. Long lead items are considered to have a procurement period of 12 months or more.

(c) A budget type construction cost estimate for IOC power, shall be provided for each of the three schemes in paragraph 3a(1) with a breakdown of long lead items.

(d) A-E to coordinate with temporary power study developed under the DAA Roads & Utilities Contract.

(e) Power loads, locations and construction time lines will be furnished the A-E.

(2) The final concept study shall be based on the selected scheme for up to three (3) basing alternatives and shall address the optimal transmission system and related corridors, recommended construction phasing, list of long lead procurement items and estimated construction costs, and shall consist of narrative descriptions, calculations, drawings, sketches and schematics. The study effort shall include, but not be limited to, the following task:

A. Optimal Transmission System

i. Provide transmission lines and corridors on topographic maps showing MX loads. Maps of loads to be provided by the COE. Location of corridors shall be based on a literature search.

ii. Provide locations of substations, switchyards, and other load points within the MX System and at utility interfaces.

iii. Indicate width of corridors.

iv. Mountainous or steep hilly areas shall be designated as such and separately defined.

v. The DTN road corridors shall be considered for colocation of the transmission system corridors.

B. Environmental Assessment. Provide an environmental assessment based on literature search and without field work.

i. Consider environmental constraints in site selections.

ii. Utilize to the maximum extent applicable sections of the DEIS.

iii. List Federal, State, and local permits required based on the MX Legal Compendium. The COE will provide Legal Compendium.

C. Protective Relaying System

i. Determine the preferred coordination scheme.

ii. Determine the optimum type of relaying system.

D. Supervisory Control and Data Acquisition System

i. Develop a list of functions to be supervised and monitored or controlled.

ii. Indicate the operational requirements of remote terminal units.

iii. Indicate the desired type and rate of communications between remote terminals and central control unit.

iv. Discuss the operational requirements of complete systems relative to security, control, and maintenance.

v. Determine the feasibility of expanding existing utility company SCADA systems.

E. Metering and Communication Requirements

i. Determine the optimum metering system for the transmission system based on user and utility company requirements.

ii. Provide recommendations for local communication systems within the power transmission system.

iii. Air Force requirements shall be provided by the Corps of Engineers.

F. Line Transposition Study. Prepare a preliminary line transposition study to determine whether a more detailed study is required. A final study, if required, shall be completed by others and is not part of this scope of work.

G. Load Flow Study

i. Identify power source locations, types, capacities, and quality.

ii. Tabulation of loads at each load point based on average demand, peak demand, and connected loads.

iii. Indicate the load flow on transmission lines during normal conditions.

iv. Indicate the load flow for single line outages, substations, switchyards, and at all other load points.

v. Provide transmission system voltages.

vi. Display all results in tabular form.

H. Availability/Reliability Study

i. Calculate empirical availability/reliability values based on actual utility company outages.

ii. Calculate availability/reliability values based on AFM 88-15.

iii. Determine the effect of the Supervisory control and Data Acquisition System on availability/reliability.

I. Fault Analysis Study

i. Obtain from the utilities the single phase line-to-ground and three phase fault equivalence for the MX/Utilities system interfaces.

ii. Determine the single phase line-to-ground and three phase fault equivalence necessary to determine the equipment fault ratings at substations, switchyards, and other load points.

iii. Provide an integrated MX/Utility power system fault model.

J. Construction Schedule

i. Develop the proposed construction phasing of the recommended MX power transmission system as a function of Air Force need dates, and the COE Construction Management Concept. The Construction Management Concept will be provided by the COE upon completion of Phase A.

ii. Indicate procurement phasing of long lead electrical equipment as a function of construction phasing.

iii. Discuss the estimated construction period for each proposed construction phase based upon the materials and construction methods. Show phasing on a bar chart.

stability studies

K. Long Lead Procurement Items

i. Provide a consolidated list of all equipment with an estimated procurement period of twelve months or more. This list shall establish the sequence of procurement such that a facility is completely furnished with equipment as a function of construction phasing. Facilities are defined as substations, switchyards, etc.

ii. Long lead equipment list shall identify each item as to operational ratings, quantities, lead time and source of information.

(3) Miscellaneous requirements and assumptions to prepare the study are listed in paragraph 4.

b. Basing Alternatives.

(1) 200 missiles in Nevada/Utah with the main base at either Coyote Springs, Nevada or Beryl/Milford, Utah.

(2) 100 missiles in Texas/New Mexico.

(3) Split basing alternatives with 100 missiles each in Nevada/Utah and Texas/New Mexico and the main operating bases at Coyote Springs, Nevada and Clovis, New Mexico.

4. Miscellaneous Items

a. Format. All submittals shall consist of a narrative description; supplemented by sketches, schematics, and drawings; calculations; and construction estimates, sectionalized by subject matter into ten (10) volumes as defined in the "Deliverables Schedule".

(1) Standard sheet size shall be 8 1/2" x 11". Foldouts shall be sized as necessary to cover material but not larger than 22" x 22 1/2". Foldout sheets shall be folded so that publication number and page number show. The outside edge of the sheet after folding shall be 8 1/2" from the binding edge of the sheet. Foldouts need not be provided for preliminary and interim submittals.

(2) Reproduction area shall be approximately 6 1/2" x 9" allowing 1 1/2" for binding margin, 1/2" for other side margin and 1" top and bottom.

(3) Pages shall be numbered.

(4) All pages shall be printed head to head.

(5) Pages may be printed both sides except that foldout/foldup pages shall be printed one side and shall be right hand pages.

(6) Each volume shall be sectionalized as follows:

Title Page
Table of Contents
List of Major Illustrations
Introduction
Main Text
Glossary/Appendix

(7) Provide for an Executive Summary.

(8) Copies shall be bound in heavy duty binders.

(9) A complete list of all vomumes shall be referenced in each volume.

(10) The Sacramento District project manager shall be consulted prior to any changes in format.

b. The narrative description shall not only limit itself to the various schemes, studies and other related tasks but shall also address seismic considerations, climatic considerations, listing of established criteria and recommendations for waivers to established Air Force criteria in order to implement the recommended transmission system, a list of agencies contacted (name of individual, address, telephone number).

c. Drawings, sketches and diagrams shall only be provided to supplement the narrative description.

(1) The optimal transmission system and proposed corridors may be shown on multiple drawings, provided the scale is sufficient to allow proper resolution. Maximum use shall be made of the topographic maps developed by the US Geological Survey.

(2) Sketches and diagrams shall be one-line.

d. Calculations shall be limited and be only of such detail to assist in the decision making process for the recommended transmission scheme.

(1) The use of automatic data processing systems are encouraged whenever this will result in cost reduction and/or improved results. Provide input/output listings as an integral part of the study.

(2) Two sets of the computer printout shall be provided to the Sacramento District.

(3) Data card decks or tapes used for final computations shall be retained by the A-E for the life of the design program.

e. The procurement cost estimate shall be a budgettype commensurate with the stage of the study. The estimate shall be based on current prices and the grand totals escalated to the midpoint of procurement for each of the proposed construction phases.

(1) The estimate shall identify equipment for substations, switchyards, and other long lead items.

(2) Provide for a cost summary sheet for each phase of construction and for the total project.

(3) A-E to utilize Sacramento District's Cost Estimating Manual as to format.

(4) Availability equipment, and anticipated market conditions will be considered in developing the estimate.

f. The construction cost estimate shall be a budgettype commensurate with the stage of the study. The estimate shall be based on current prices and the grand totals escalated to the midpoint of construction for each of the proposed construction and procurement phases.

(1) The estimate shall identify substations, switchyards, transmission line support structures, protective relaying system, supervisory control and data acquisition system, metering and communications systems, and other main cost items.

(2) Provide for a cost summary sheet for each phase of construction and for the total project.

(3) A-E to utilize Sacramento District's Cost Estimating Manual as to format.

(4) Availability of labor, materials, local labor rates, construction practice, and anticipated construction market conditions will be considered in developing the estimate.

g. Systems and equipment selection: Provide the annual cost of maintenance converted to present worth, capitalized and combined with the first cost to determine the most economical alternative.

h. No topographic surveys will be required to be performed by the A-E. Maximum use shall be made of existing USGS maps.

i. Review comments made during the concept study shall be completely annotated as to action taken by the A-E and returned to the Sacramento District with the submittal. The A-E's transmittal letter shall include a list of rebutted comments with a clear statement outlining the A-E's position.

j. Two progress review meetings will be held in the A-E's office. The A-E will discuss the status of the study and the results obtained of the various studies. Thirty-five (35) calendar days prior to each meeting, the A-E will distribute for review a summarized package i.a.w. the list of deliverables.

5. Deliverables and Period of Services. The items of work shall be completed and ready for submittal as shown in Attachment 2. Refer to Section 3a(2) of this scope for a minimum description of each item of work.

6. Period of Service

a. Total study: 270 calendar days after notice to proceed. This includes review times by the Government of 35 calendar days before each progress review meeting, but does not include the final review period of the period for correction of finale.

b. Preliminary Concept Study Incl IOC Power: 120 calendar days after notice to proceed.

c. Preliminary list of long lead procurement item (IOC): 90 calendar days after notice to proceed.

2 Atch

BASING OPTIONS

Option 1: All Phase A work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M. and 2 sites for split basing alternative.

Option 2: All Phase B work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M. and 2 sites for split basing alternative.

Option 3: All Phase C work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M and 2 sites for split basing alternative.

Option 4: Phase A work for Nevada/Utah Basing Alternative with MOB at 1 site.

Option 5: Phase B work for Nevada/Utah Basing Alternative with MOB at 1 site.

Option 6: Phase C work for Nevada Utah Basing Alternative with MOB at 1 site.

Option 7: Phase A work for Texas/New Mexico Basing Alternative.

Option 8: Phase B work for Texas/New Mexico Basing Alternative.

Option 9: Phase C work for Texas/New Mexico Basing Alternative.

Option 10: Phase A work for split Basing Alternative.

Option 11: Phase B work for split B g Alternative.

Option 12: Phase C work for split Basing Alternative.

Attachment # 1

SCHEDULE OF DELIVERABLES

LIVERABLES	Volume Number	(90 Cal Days)	Phase A (120 Cal Days)	Phase B (80 Cal Days)	Phase C (70 Cal Days)	Corrected Finals Study (20 Cal Days)
eliminary List of Long Lead Items		F/40				
eliminary Concept Study Including IOC Power Plans			F/40			
ncept Study					F/40	CR/40
Executive Summary	I					
Optimal Transmission System	II		P/40	I/40	F/40	CF/40
Environmental Assessment	III		P/40	I/40	F/40	CF/40
Protective Relaying					F40	CF/40
Supervisory Control & Data Acquisition System	IV					
Metering & Communications Requirements						
Line Transposition Study					F/40	CF/40
Land Flow Study	V				F/40	CF/40
Availablilty/Reliability Study	VI				F/40	CF/40
Fault Analysis Study	VII			I/40	F/40	CF/40
Construction Schedule	VIII		P/40	I/40	F/40	CF/40
Long Lead Electrical Equipment	IX		P/20	I/20	F/20	CF/20
Cost Estimates a)Construction b)Long Lead Items	X		P/20	I/20	F/20	CF/20

EY

- Preliminary Submittal
- Interim Submittal
- Final Submittal
- Corrected Final Submittal
- Number of copies

Attachment #2

#3

MAY 7 1981

DEPARTMENT OF THE AIR FORCE
REGIONAL CIVIL ENGINEER - MX (AFESC)
NORTON AIR FORCE BASE, CA 92409

REPLY TO ATTN OF: DEES

4 May 1981

SUBJECT: Technical Data Requirements

TO: Nevada Power Company
ATTN: Mr. John Arlidge
Manager Special Projects
P. O. Box 230
Las Vegas NV 89151

1. We are transmitting through you to the Nevada/Utah Electric Power Utility Group, a "Want" List of technical data needed by the COE for their A-E who is developing the conceptual study of the M-X Project, Electrical Transmission System.

2. Request above data be provided to AFRCE-MX/DEES by 13 May 1981.

3. If it will be necessary to incur costs in obtaining and supplying the technical data we request, please so advise and await our authorization.

ROBERT L. WONG
Deputy Director, Engineering Division

1 Atch
"Want" List

Cy to: HQ USAF/RD-M (MXLO/Maj Huff)
HQ USAF/RD-M (MXLO/Maj McMains)

MX MISSILE PROJECT

"Want" List of Technical Data Needed From Electric Utilities

1. Geographical and single line diagrams of electric facilities within the area, down to and including 2.4 kV. This should include both present and future facilities within the following counties:

STATE/COUNTY	ALTERNATIVE		
	PA, 1-6	7	8
Nevada			
Esmeralda	138	—	—
Eureka	323	—	—
Lander	84	—	—
Lincoln	953	—	920
Nye	1,324	—	629
White Pine	437	—	36
Subtotal	3,259	—	1,585
Utah			
Beaver	189	—	188
Juab	314	—	17
Millard	754	—	510
Tooele	84	—	—
Subtotal	1,341	—	715
Region Total	4,600	—	2,300

2. Any public documents involving environmental considerations for transmission or distribution facilities on recently installed or proposed facilities.

3. Existing philosophy on allocation of losses and operation and maintenance in the case of joint use of facilities by two or more utilities.

4. Equipment or transmission line requirements as defined by utility construction standards or customer connection standards.

5. Company safety practices on customer connections involving customer connected generation.

6. At the potential source connection points:

   a. Equivalent impedances, both positive and zero sequence impedances.

   b. Voltage regulation and any limitations on "in" or "out" var flow.

   c. Restrictions such as geographical on the addition of connections to present source points (substations).

   d. Billing metering and telemetering facilities including types, location, need for backup and preferred methods of totalization.

e. Types of supervisory control and potential for adding points along with associated communications.

f. Types of protective relaying and assoicated communications.

g. Need for voice communications between the utility and MX facilities.

7. Identify specific requirements that utilities may have for design and construction of temporary distribution and transmission facilities for Coyote Springs, NV; Beryl, UT; and Milford, UT. State requirements for upgrading existing lines to accommodate MOB/DAA/OBTS loads and DDA loads in Dry Lake Valley, Wah Wah Valley, Pine Valley, Delmar Valley, Pahroc Valley, Snake Valley, Tule Valley, and Whirlwind Valley.

8. Submit names, addresses, and phone numbers for the following utility company personnel:

a. Coordinator/Project Engineer.

b. Technical Representatives.

9. Indicate in general the steps necessary to proceed to design and construction of future systems, including the feasibility of obtaining necessary approvals. Show realistic time-frames for accomplishing the above (EIS, utility coordination, etc.).

10. Provide a summary of critical transmission and distribution systems design and construction standards and requirements, including the following:

a. Environmental constraints on construction.

b. Design standards for pole foundations, pole types, substation/ switchyards, etc.

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach and Bob McMains

FROM: Ann Keegan

DATE: June 19, 1981

SUBJECT: Cultural Resources Meeting

On June 10 and 11, 1981, a cultural resources meeting was held at the Corps of Engineer's MX Program Analysis (CEMXPA) office in San Francisco, California. The agenda, attendance list and handouts are attached. The discussion is summarized below.

Howard Watts (AFRCE-MX/DEVN), began the meeting with introductions. He indicated that he would like this group to become a cultural resources management team. One representative from each affected organization (the Air Force Regional Civil Engineer's Office for MX (AFRCE-MX), the Bureau of Land Management (BLM), the State Historic Preservation Officers (SHPOs) and the contractors) would meet regularly to see that the Programmatic Memorandum of Agreement (PMOA - see Attachment A) is properly implemented.

Next, representatives of the Human Environmental Resources Corporation (HER Corp) discussed Attachment B, which is a series of relevant organizational charts prepared for the cultural resources participants. Their review is necessary to gain a perspective on the MX cultural resources program participants, organizational hierarchy and interface/contact points.

Figure 1, Part 1: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The AFRCE-MX is responsible for the design and environmental analysis of the MX weapon system. Fourteen different contractors are involved in cultural resources analysis and planning. HER Corp is responsible for assisting the AFRCE-MX in cultural resources program management. Their first deliverable, which is due next week, will outline the planned studies of all MX-related contractors until the end of the current fiscal year (September of 1981).

Figure 1, Part 2: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The federal agencies cooperating with the Air Force on the MX project are outlined. The inclusion of theForest Service was discussed, since they have not (to date) been actively involved in coordination of any kind with the Air Force on MX. A meeting will be scheduled in the near future with the Regional Forester to actively seek the agency's involvement. It will probably be held in Utah.

Figure 1, Chart 3: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The functions of the Corps of Engineers (COE), CEMXPA and the various districts/ research elements involved in environmental studies, engineering and planning are listed. The COE's involvement at this time is only with the Tier IIA environmental assessments (EAs).

At this point, there was a digression on tiering. The Air Force is not certain about the level of detail and sequencing of the Tier II EAs. The land withdrawal application will be a component of Tier II. Tier III EAs will deal with the pre-construction environmental requirements. The Tier II analyses will be equivalent to class 2 studies, and the Tier III analyses will be equivalent to class 3 studies. Currently, environmental studies (including cultural resources) are being undertaken by Henningson, Durham and Richardson (HDR) and EDAW at the four candidate main operating base (MOB) locations; the results will form the basis of the first increment of the Tier IIA EA. However, there is a serious timing problem in bridging the Tier I environmental impact statement, the Tier II EA, and the Tier III EAs.

Figure 2: ORGANIZATIONAL CHART OF AFRCE-MX/DEVC

The structure of the Environmental Planning Divsion (one of several in the AFRCE-MX) is the most relevant to cultural resources participants. The four branches and their functions and responsibilities were discussed briefly.

Figure 3: CEMXPA ORGANIZATIONAL CHART

The COE representatives indicated that this chart is incorrect. They discussed the actual COE hierarchy. CEMXPA is a recently established organizational element dealing only with MX; it is seeking divisional status. The districts/ research elements are in a cooperating status with CEMXPA but are not responsible to it (e.g., the Los Angeles District is responsible to the South Pacific Division). CEMXPA is the equivalent of a division, but without any support elements. The usual chain of responsibility is district to division to the Chief Engineer. In this unusual circumstance, the districts/research elements coordinate their activities with their division, but also deal directly with CEMXPA. CEMXPA works directly with the AFRCE-MX.

MX design activities will be concurrent with construction; this will require close cooperation and monitoring of all impacted resources, especially cultural resources. It is estimated that during the peak construction years, ten miles

of road will be built per day. Continuous monitoring of archaeological resources will be necessary. The Tulsa District will have 16 separate contractors next fiscal year simply to design MX roads at a Clovis, New Mexico MOB.

An updated status of the MX project then was discussed. Currently, the AFRCE-MX CEMXPA and their contractors are all proceeding as if the Carter basing mode made will be confirmed. The basing mode decision process (Townes Panel/Secretary of Defense/ Presidential) was reviewed, as well as the Congressional requirements to be met. The President will submit the basing mode decision to the Congress; the Secretary of Defense will provide the justification, including a comparison of alternative basing modes. The Appropriations committee will review the basing mode decision and come to a conclusion. If required, the land withdrawal will be enacted.

Howard Watts then asked all of the participants to introduce themselves again, and discuss their cultural resources responsibilities and their current and future field work and studies. This would give everyone a perspective on who is doing what where.

Sandra Schultz (CEMXPA) began by reiterating the role of CEMXPA in relation to the COE districts/research elements and the AFRCE-MX. The COE will act as the MX construction for the Air Force. The communication-responsibility channel is: COE district research elements to their division to the CEMXPA to the AFRCE-MX to the Air Force contractors. There was discussion on the inefficiencies of this network; however, due to the formalized management controls imposed by the CEMXPA and the AFRCE-MX, greater flexibility (especially with respect to communication) seems unlikely.

Helen Wells (Los Angeles District COE) said her district is responsible for the MX design and construction activities at the Coyote Springs, Nevada MOB location At this point, Catherine Slusser (EDAW) asked for clarification of the COE responsibilities.

EDAW is doing the base comphrensive plan for the MOB. They are currently looking at all four sites; they are reviewing the literature and environmental resource field data for these sites. The life support system (construction camp) will be within the metes and bounds of the 10,000 acre site where EDAW is to conduct field activities.

It became apparent that there is confusion between the COE and EDAW about their respective responsibilities. Their responsibilities appear to overlap, especially with regard to design and selection of facility sites.

There was then a digression on the question of overlapping responsibilities. It is the understanding of the Tulsa District that it would only design and site the MOB roads. The Tier IIA EA (selection of an MOB site) will incorporate data gathered by EDAW and HDR. HDR is responsible for the development of the Tier IIA EA. Further, the COE has been told by the AFRCE-MX not to contact <u>any</u> Air Force contractors.

John Fagan, (Portland District COE) said that it was his understanding that the Portland District was to use the results of EDAW's 20 percent cultural resources

sample survey and conduct the intensive class 3 cultural resources survey at the selected 10,000 acre site (Milford MOB location). The COE would make the final site selection and complete the detailed engineering designs for each facility.

Catherine Slusser said the EDAW ECP contract specifies that EDAW conduct preliminary sitng and design activities at each of the four MOB locations. After the Air Force selects one MOB location, EDAW will concentrate on this location. Their primary responsibilities are for site selection and detailed design of facilities, utilities and roads. Archaeology is represented on their environmental assessment team. At four ten-thousand acre site (metes and bounds) within each vicinity zone is where the 20 percent cultural resources sample survey woul be done (according to contract). However, bec se the Air Force has not approved EDAW's recommended sites, EDAW began the surveys in the recommended sites, at some site enlarging the area to be surveyed. (The survey area at the Milford site is approximately 40,000 acres while the survey area at the Beryl site is about 23,000 acres). EDAW's preliminary Tier IIA EA data area due this month and the final data are due in August; however, these submittal dates are contingent on the Air Force's approval of the sites currently being surveyed.

HDR indicate that the draft Tier IIA EA is scheduled to be submitted to the Air Force in August, with the final EA due in October. However, both the COE and HDR conjectured these dates will slip. The COE will prepare EAs on their 1200-acre tract and transportation-communication-utilities corridors this fiscal year within the EDAW MOB sites.

Jan Tilloston (ERTEC NW) discussed the environmental clearances (cultural and biological) conducted at specific MX weapon system facility sites (shelters, cluster maintenance facilities and remote surveillance sites) in the Initial Operating Capability (IOC) valleys (Dry Lake Valley, Nevada and Pine and Wah Wah Valleys, Utah). HDR asked whether both direct and indirect impacts were examined; EDREC NW replied both were, but the extent of indirect impact assessment was limited to the valleys. There was some question as to whether this would constitute an adequate assessment of indirect impacts. An extended discussion about the HDR and ERTEC NW responsibilities and Tier II requriemments.

The cultural resources inventories for the IOC valleys and at the MOB sites will serve as the primary data base for addditional intensive, site-specific studies. The COE said that the ultimate responsibility for cultural resources management was theirs.

Gary Coombs (HER Corp) said that they have tasked with devising an implementation plan for the PMOA. They have two main deliverables; the first will deal with the laws pertaining to the cultual resources,and the second will outline a cultural resources study plan (archaeology, history, and prehistory (Indian) to fulfill the intent of the PMOA. HER Corp is attempting to integrate the various goals of different contractors by coordinating their activities (especially the scopes of work) with the regulatory agencies specified in the PMOA (the BLM and the SHPOs). The cultural resources managment plan being developed will insure that satisfactory consultation (as oulined in the PMOA) does occur. HER Corp will also provide technical assistance to the AFRCE-MX, such as reviewing documents. They will help the AFRCE-MX implement a centralized master environmental resources data bank, propse standardized cultural resources reporting procedures to be used

by all contfactors, and provide liaison to the academic and professional communities. Their goal is to formulate a sequential, integrated series of programs to be implemented in a standard form.

Ralph Mitchell (CERL) indicated that CERL was responsible for the design of the life support system(or construction camp) at the Beryl MOB location. He asked for guidance on the proposed archaeological work to be done by contract. CERL was told that it must have the BLM/SHPOs approval of any scope of work, in order to satisfy the PMOA's consultuation requirements. The cumbersome process that CERL must follow is: CERL to the CEMXPA to the AFRCE-MX to the BLM/SHPOs and reverse.

Betsy Holbrook (HDR) said that they will soon be initiating Native American cultural and socioeconomic studies. Teams will be sent into the field to interivew the Southern Paiutes. HDR is concerned that this work is scheduled for completion by July 15, and although its extension seems necessary, it may not be extended because of the Tier IIA EA deadlines. HDE is currently developing the scope of work; it will be coordinated with the BLM and the SHPOs.

Michael Macko (HDR) said HDR is examining the direct and indirect cultural resources impacts (architectural, archaeological, historical and prehistorical) of locating an MOB at each of the four locations under consideration. HDR said that since they are under contract to the Ballistic Missile Office (BMO), that it is an Air Force responsibility to coordinate the PMOA, not theirs. There was an extended discussion on this point. Further, HDR said that many study parameters (e.g., sample size, area of influence, sample design, etc.) should be clarified for each contractor.

Holly Dunbar (IAS) discussed the function of the Interagency Archaeological Services. The agency's primary involvement with the MX project will be the emergency discovery of archaeological sites. Whenever this occurs, construction activity is halted and the appropriate federal agency(probably the COE in this case) contacts the IAS archaeologist in Washingtion, D. D.; a staff archaeologist is dispatched to the site within 48 hours and consults with the other archaeologists (e.g., COE, BLM, SHPO. contactor) to agree on the acceptable salvage to be done.

Laverne Herrington (Texas SHPO) and Hugh Ball (New Mexico SHPO) both said that they were not involved actively with MX as yet. They both indicated that they are in a holding pattern until the basing mode decision is made.

Rich Haynes (Nevada BLM) said that he is concerned with the resiting criteria. It is impractical to avoid impacting cultural resources. The BLM would like to see the National Register significance evaluation and the determination of the MX project's effect on a site be done by the same individual who does the field work. This is curently not a common cotractor paractice (e.g., HDR contracts for the data collection but analyzes the data in-house, while ERTEC has the same individuals evaluate the data as collected by them). The BLM is concerned with preserving the integrity of cultural resources analyses to insure continuity. It was further stressed that this evaluation and determination of the MX project's effect process needs to be done in consultation with the BLM and the SHPOs. Furnishing inventories is not acceptable to the BLM. It is his understanding that Tier II is concerned with the MOB sites and Tier III with the IOC valleys. He has attempted to alert the Air Force to potential problems with tiering and the PMOA. Also, the BLM is still waiting for HDR to transmit their

final report from last year --- this situation is jeopardizing the Nevada State Museum's BLM antiquities permit. It was mentioned that the MOB will have 30,000 people.

Wilson Martin (Utah SHPO) then explained the role of the SHPO in the PMOA; the role is one of liaison and assisting the Air Force in determining the least risk path. Helpful services can be provided. Several pertinent sections of the PMOA were reviewed. He is concerned about the discussion of cultural resources managemnt with no committemnt to act appropriately.

Catherine Slusser gave a brief description of EDAW's archaeological surveys at the four MOB sites (within the vicinity zones). EDAW began their 20 percent sample surveys within the preferred sites, but since the Air Force has not concurred with these to date EDAW has expanded the area to be surveyed at the Beryl and Milford locations, becuase of Air Force uncertainties about the recommended sites. EDAW hired a team of three sub-contractors (Nevada State Museum, University of Utah, Eastern New Mexico University, as well as the consultant from Tennessee -- Robert Newman) to insure comparability of work and development of an applicable program. The Work began in May at all four recommended sites, and is still in progress at the Milford location. Howard Watts referred to large, color MOB vicinity zone LANDSAT maps at AFRCE-MX, but EDAW has not seen them. Twenty-five meter transect were walked at each of the sites/extended areas; shovel testing was done, but no machine testing. The results for each site were briefly discusssed. Only the Utah areas are discussed below.

Beryl

Thirty-two sites were found at the Beryl expanded area, concentrated around the foothills and the mouths of springs. EDAW is looking at other potential ten-thousand acre sites in the southwest sector of th vicinity zone for environmental and cultural reasons (i.e., to lessen the impacts on the foothills). Six to eight of the sites found were significant and they were all isolated sites. A 20,000 acre area was surveyed, containing three overlapping alternative sites; to date EDAW has no clear indication of prefernece from the Air Force.

Milford

The southern Milford site has already been surveyed and currently the central Milford site is being surveyed. Five sites were located, and at least one of them was historical (homestead). The preliminary reports are due next week.

Rich Fike asked whether EDAW is having their subcontractors determine the eligibility of sites. EDAW said this requirement is included in their subcontractors' scopes of work. HDR asked whether indirect impacts are being determined as well; EDAW said they are only doing a 20 percent sample survey within the sites/expanded areas.

EDAW did consult with the Southern Paiutes, who sent representatives out in the field with the archaeologists. The Indians volunteered little information. The consultation included the entire vicintiy zone, not just the transect s that were walked. The Southern Paiutes would only identify what the archaeologists found.

HER Corp then discussed activities to date (see Attachemnts 1-4). The history of the PMOA was reiterated; the PMOA was signed in August of 1980 bythe Advisory Counsel on Historic Preservation, by the Air Force in October of 1980, and subsequently, by the BLM and two of the affected SHPOs (including Utah). On May 1, 1981, the HER Corp contract became effective, and they initiated work on the cultural resources implementation/management plan. Their first deliverable is due in draft form to the Air Force on June 18, 1981. It will examine the legal requirements, and in particular the scheduling of the Air Force/COE contractors' activities and the construction sequence. To date, HER Corp has developed three separate, complimentary programs: 1) an archaeological compliance program, 2) a Native American compliance program, and 3) a history/architecture/community studies compliance program.

Howard Watts asid that HDR's environmental resources data are to be forwarded to the AFRCE-MX next week. TRW submitted a proposal to develop and maintain a centralized environmental resources data bank at the AFRCE-MX; the Air Force did not accept the proposal for this fiscal year, but it is under consideration for future years.

It was proposed that a hierarchy of authority be developed. The AFRCE-MX should use a mangagment team and maintain a centralized data bank. The AFRCE-MX directly interfaces with their own contractors and the CEMXPA. CEMXPA has direct links through the divisons to the districts/research elements who directly interface with their own contractors. The Contractors should not have to worry about Air Force/COE coordination and management responsibilities. Roles need to be explicitly defined indicating responsibilities and authority. The Air Force needs to effectively manage the project. The BLM said this could cause problems, because the contractors have BLM antiquities permits and the data collected are the property of the BLM. The COE said that data are being collected with federal funds; therefore, it is public information to be shared with all. Further, withholding the data are contrary to professional standards. The lack of coordination with multiple concurrent efforts is a serious problem. HER Corp will assist the Air Force in developing and implementing a cultural resources management plan. The COE suggested that the Air Force disseminate a written policy establishing a coordination/ liaison network.

At this point, HER Corp formed three discussion groups (one for each program). The activities Air Force/COE contractors were discussed, as well as the consultation and data the SHPOs would be able to provide. HER Corp was gathering this information to modify the three programs to insure that the required cultural resources studies would be conducted in a thorough and a timely manner.

MX CR Meeting San Francisco 6/10/81
Afternoon

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MX CULTURAL RESOURCES MEETINGS
SAN FRANCISCO JUNE 10-11, 1981

AGENDA

Wednesday Morning, June 10

Planning session for FY81 cultural resource studies. ERTEC NW, AFRCE, HER Corp. Purpose is to establish priorities for FY81 studies and to develop plans for implementing these studies.

Wednesday Afternoon, June 10

General session involving all contractors involved in MX cultural resource studies. Purpose is to introduce the multiple players involved in MX studies and to establish a framework for communication and coordination during the upcoming studies.

Thursday Morning, June 11

General session involving all contractors involved in MX cultural resource studies. HER Corp. personnel will present a status report on the PMOA Management Plan that is being developed. A draft version of an annotated outline for the Management Plan will be distributed for review and comment.

Thursday Afternoon, June 11

Small group sessions. Topics to be determined.

Historic
Preservation

1522 K Street, NW
Washington, DC 20005

PROGRAMMATIC MEMORANDUM OF AGREEMENT

WHEREAS, the U.S. Air Force, Department of Defense, proposes to deploy the M-X System (undertaking) within the States of Nevada, New Mexico, Texas, and/or Utah; and,

WHEREAS, the M-X System may be deployed on land managed by the Bureau of Land Management (BLM), and BLM and the Air Force have management responsibilities with regard to historic properties pursuant to Executive Order 11593, and the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320); and,

WHEREAS, the Air Force has assumed lead agency status and primary responsibility for compliance with the historic preservation statutes and regulations referenced herein on behalf of both itself and BLM; and,

WHEREAS, the Air Force, in consultation with the State Historic Preservation Officers (SHPOs), has determined that the proposed undertaking could have effects upon historic and cultural properties included in or eligible for inclusion in the National Register of Historic Places (Register); and,

WHEREAS, pursuant to Section 106 of the National Historic Preservation Act of 1966, Section 2(b) of Executive Order 11593, and Section 800.4 of the regulations of the Advisory Council on Historic Preservation (Council), "Protection of Historic and Cultural Properties" (36 CFR Part 800), the Air Force has requested the comments of the Council; and,

WHEREAS, pursuant to 36 CFR Sec. 800.8(a) of the Council's regulations, the Air Force has requested development of a Programmatic Memorandum of Agreement (Agreement); and,

WHEREAS, the Air Force, the Council, BLM, and the SHPOs of Nevada, New Mexico, Texas, and Utah have consulted and will continue to consult and review the undertaking to consider feasible and prudent alternatives to avoid, minimize, or satisfactorily mitigate adverse effects,

NOW, THEREFORE, it is mutually agreed that implementation of the undertaking in accordance with the following stipulations will avoid or satisfactorily mitigate its adverse effects on historic and cultural properties.

Stipulations

The Air Force will insure that the following measures are carried out.

I. General

A. The Air Force will establish a Review Committee to assist in oversight of all historic preservation related M-X activities to insure that such activities meet high standards of professional methodology. The committee will report to the Executive Director of the Council and to the Air Force, and will act and be funded in accordance with Attachment 1.

B. The Air Force will afford the appropriate SHPOs, and the State offices of BLM, opportunity to review and comment on all scopes of work, and significant revisions of such scopes, relating to historic preservation; and the opportunity to review and comment on the historic preservation reports or products generated under this Agreement. Informational copies of these documents will be provided to the Council.

C. The Air Force will provide data generated under this Agreement to the appropriate SHPOs and State offices of BLM.

D. The Air Force, in consultation with appropriate SHPOs, will notify the public of intended significant actions under this Agreement, will provide timely notice to news media, and will afford the public the opportunity to comment to the Air Force, the SHPOs, or the Council regarding these actions.

E. The Air Force, in consultation with the appropriate SHPOs, will ensure that all historic preservation activities are carried out by or under the supervision of, qualified persons as prescribed in 36 CFR Sec. 1201.5.

F. The Air Force will ensure that all stipulations of this Agreement are met by its contractors as well as by all participating units of the Air Force.

G. The Air Force, in consultation with the appropriate SHPOs, will ensure that its contractors and Air Force personnel and resident dependents are advised against illegal collection of historic and prehistoric materials, will encourage those with interests in such materials to participate in nondestructive activities, and will cooperate with BLM to insure enforcement of the Archeological Resources Protection Act of 1979.

H. Pursuant to 36 CFR Sec. 800.8 of the Council's regulations, the Air Force will submit an annual report to the Council, the SHPOs, and to Interagency Archeological Services (Heritage Conservation and Recreation Service, Department of the Interior) on all actions taken pursuant to this Agreement.

I. The Air Force will provide data to assist the SHPO's in identifying and documenting the budgetary and staff impacts arising from this undertaking. on the SHPO

II. Identifying and Mitigating Adverse Effects of Construction and Operation

A. In consultation with BLM and the appropriate SHPOs, and in accordance with the guidelines in Attachment II, the Air Force will locate and identify historic properties in the potential impact area, determine their significance, and assess the undertaking's impact upon them by:

1. development of an initial study plan, including but not limited to:

   (a) definition of preliminary study goals

   (b) establishment of study methods

   (c) indication of predicted types of historic and cultural properties

   (d) establishment of study team composition

   (e) establishment of programs for data storage, management, and use which are, to the extent feasible, compatible with existing State and BLM systems,

   (f) development of a calendar of tasks (see Attachment II);

2. conducting preliminary studies based on the study plan, including background data and field inspection of sample areas during initial environmental analyses of the potential impact areas, to predict where adverse effects upon historic and cultural properties are likely to occur;

3. development and implementation of a plan for intensive field survey of all locations where adverse effects upon historic and cultural properties are likely to occur in the vicinity of potential MX permanent and temporary facilities such as base sites, access and utility corridors, borrow sources, and other MX support facilities. This plan will include:

   (a) description of historic and cultural property types expected

   (b) predicted distributions of historic and cultural properties

(c) study questions to be addressed

(d) study methods; including methods of field inspection, testing, and analysis

(e) study team composition

(f) data storage and management program.

B. Where prudent and feasible, in consultation with the SHPOs and BLM, the Air Force will avoid adverse effects on historic and cultural properties through design of M-X facilities, by relocation of existing facilities, or by other means.

C. In consultation with the SHPOs and BLM, the Air Force will develop guidelines for documentation or data recovery from historic and cultural properties that cannot be avoided or protected. The guidelines will take into account:

1. the data generated by the preliminary and intensive studies

2. the concerns of local communities and social and ethnic groups

3. the Native American Religious Freedom Act

4. 36 CFR Part 66 and its appendices published by the Department of the Interior on January 28, 1978 (42 FR 5374-82)

5. the standards of the Society of Professional Archeologists

6. other applicable Federal regulations, standards, and guidelines.

D. The Air Force will in a timely manner deliver copies of the initial study plans (II.A.1) and guidelines for data recovery (II.C) to the Review Committee, the State BLM offices, and the appropriate SHPO and afford them 15 working days after receipt, to review them. The Review Committee, SHPO, and BLM will provide written notice of receipt and indicate their objections, if any, within 15 working days. Should the Review Committee, SHPO, or BLM object, the Air Force will arrange a meeting to resolve differences before proceeding with the action to which the Review Committee, SHPO, or BLM has objected. If the differences cannot be resolved, the Air Force will take the comments to the Committee, SHPO, and BLM into account in deciding whether to and how to proceed.

E. When it is not prudent or feasible to avoid adverse effects upon a historic or cultural property, the Air Force will follow 36 CFR Part 1204 to determine whether the property is eligible for inclusion in the Register, and consult with the appropriate SHPO and BLM as appropriate, and,

1. if the affected property meets criteria for listing in the Register primarily because it may yield information important in prehistory or history, the Air Force will institute a documentation or data recovery program in accordance with the Guidelines established under Stipulation II.C. Prior to initiating any documentation or data recovery program, the Air Force will notify the Review Committee, BLM, SHPOs, and any concerned local communities, or social and ethnic groups. Should an objection be raised, the Air Force will consult with the objecting party to resolve the objection. If no agreement can be reached among the Air Force, the SHPO, and BLM on the documentation or data recovery program, the Air Force will request the comments of the Council pursuant to 36 CFR Sec. 800.6;

2. if the affected property is determined eligible for listing in the Register for reasons other than, or in addition to, its information potential, the Air Force will consult with the appropriate SHPO to determine the nature of the undertaking's effect on the property and, pursuant to 36 CFR Sec. 800.4(d), request Council comments.

F. Pursuant to the American Indian Religious Freedom Act of 1978 (P.L. 95-341), the Air Force will consult with groups that have cultural ties to the study area in order to identify locations and issues of concern to them and to work with these groups and the parties to this Agreement in resolving conflicts. The Air Force will take the concerns of these groups into consideration during the design and construction of the undertaking, and during implementation of this Agreement.

G. During the implementation of any portion of the undertaking, should previously unknown historic or cultural properties be discovered, the Air Force will comply with 36 CFR Sec. 800.7 and/or the data recovery guidelines developed under paragraph C above.

H. Before M-X construction is complete, the Air Force will consult with the SHPOs and the BLM to establish preservation mechanisms to accompany operation and maintenance of the facilities. Operation and maintenance will also be covered under this Agreement.

III. The Air Force and the Council will work together as members of the Economic Adjustment Committee in an effort to ensure that Federal Government activities to accommodate population and infrastructure growth resulting from M-X deployment are sensitive to the historic and cultural values of the deployment areas. The parties agree in principle that the Federal Government should assist affected States and communities in the development and implementation of programs that will contribute to protection of the historic and cultural character of communities subject to short-or-long term growth as the direct or indirect results of the undertaking. Such programs should be commensurate in scope

with the level of projected impact of the undertaking on each affected community, and include but not be limited to:

A. identification of districts, sites, buildings, structures, and objects included in or eligible for inclusion in the Register within each community;

B. development and implementation of measures to minimize destruction and maximize preservation and reuse of historic sites, buildings, structures, districts, and objects in Federal construction and assistance projects within each affected community;

C. establishment of design guidelines to make new construction as compatible as possible with the historic environment of each community; and,

E. establishment of measures to foster successful integration of new facilities into the existing cultural and architectural fabric of each community.

IV. Avoiding Inadvertent Damage During Pre-Construction Studies

A. The Air Force will ensure that proper coordination occurs between its personnel and contractors responsible for historic preservation and its personnel and contractors responsible for environmental, geological, engineering, and other studies, to minimize the danger posed to historic properties by geological testing, survey teams, and other activities and personnel. Intensive surveys will be conducted in advance of any land-modifying activity. Geological test sites and other locations of land-modifying activity will be designed to avoid damage to historic properties.

B. If test excavations are necessary to obtain data needed for the evaluation of historic properties under Stipulations II.A.2 and II.A.3 above, the excavations will not be allowed to exceed the scope necessary for basic evaluation, will not utilize mechanized equipment without the approval of the appropriate SHPO and BLM, and will be carried out in accordance with strict archeological controls.

V. Definitions

As used in this Agreement:

A. Air Force means the U.S. Air Force acting by itself or through agents or contractors.

B. Historic and Cultural Properties means properties included in or likely to meet the criteria for inclusion in the National Register of Historic Places.

C. Historic preservation includes, but is not limited to, the identification, evaluation, protection, rehabilitation, reuse, recording of, and salvage of historic properties.

D. Potential Impact Area means the area in which the undertaking may reasonably be thought to have potential positive or adverse, direct or indirect effects upon historic properties.

Robert Garvey Aug 29 (date) 1980
Executive Director
Advisory Council on Historic Preservation

SIGNED SIGNED
(date)
U.S. Air Force

(date)
Bureau of Land Management

(date)
Nevada State Historic Preservation Officer

(date)
Texas State Historic Preservation Officer

(date)
Utah State Historic Preservation Officer

(date)
New Mexico State Historic Preservation Officer

(date)
Chairman
Advisory Council on Historic Preservation

ATTACHMENT 1

Review Committee Guidelines

A. Responsibilities

1. To monitor progress of the M-X Historic Preservation Program and advise the Air Force and Council of any actions needed to ensure maintenance of high professional standards.

2. To review guidelines, scopes of work, research designs, survey reports, and other documents developed by the Air Force and to advise the Air Force and the Council of any changes appropriate to ensure maintenance of high professional standards.

3. To assist in the resolution of disputes that may arise over the quality or appropriateness of particular historic preservation related activities, or of the M-X Historic Preservation Program in general.

B. Organization:

1. Membership will consist of:

a. the Executive Director of the Council and the Secretary of the Air Force or their designees, who will co-chair the committee;

b. the Director of BLM or his designee;

c. the following non-Federal members who will be appointed by the Executive Director and the Secretary of the Air Force:

1) one professional archeologist knowledgeable in the archeology of each general basing region (e.g., Texas, New Mexico, Utah/Nevada)

2) one professional historian, preferably one with a knowledge of architectural history who is also knowledgeable in the history of each general basing region

4) other members as the Secretary of the Air Force and Executive Director may determine to be necessary.

2. Procedures:

a. the committee will meet at the call of the co-chairmen;

b. the committee may assign tasks to subcommittees or individual members;

c. the Air Force will provide staff support; and,

d. the committee will forward any meeting announcements, minutes, and other documents afforded to committee members to the SHPOs.

3. Funding: The Air Force will fund:

a. costs of travel and per diem;

b. stipend not to exceed $100 per day for non-Federal committee members engaged in committee business;

c. postage and telephone.

ATTACHMENT 2

Guidelines: Calendar of Tasks

Task I.

A. Initial study plan (II.A.1)

B. Establish review committee (I.A.;Atch.1)

Task II.

A. Conduct preliminary studies (II.A.2)

B. Develop plan for intensive field survey (II:A.3)

C. Develop guidelines for documentation and data recovery (II.C)

Task III.

A. Conduct intensive field survey (II.A.3)

B. Redesign to avoid historic properties where feasible and prudent (II.B)

Task IV.

A. Determine eligibility and effect, and mitigate adverse effects (II.E).

Consultation occurs, and comments are considered, at the beginning and completion of each task.

time, salaried officers or employees of the Government.

b. An advisory committee may be established to serve the Department of the Air Force as a whole, a single command or other Department of the Air Force activity or serve such activities collectively, provided that no advisory committee will be formed or utilized by any activity of the Department of the Air Force unless (1) the committee is specifically authorized by law, or (2) the committee is specifically approved, in writing, by the Secretary of Defense, to be in the public interest in connection with the performance of duties imposed on the Department of the Air Force or one of its subordinate activities.

c. An advisory committee whose duration is not otherwise fixed by law will terminate no later than 2 years from the date of its formation unless the Secretary of Defense has determined, prior to the expiration of such 2-year period that its continued existence is in the public interest. A similar determination must be made to continue the existence of such a committee for each subsequent 2-year period thereafter.

25. Rules for Forming, Continuing, and Appointing Members of Advisory Committees:

a. No activity will form, utilize or participate in an advisory committee, other than those committees excepted by paragraph 23, without the advance specific approval, in writing, by the Secretary of Defense.

b. Commands desiring to form, utilize, or participate in advisory committees will submit requests for Secretarial approval to HQ USAF/DPCX. Five copies of the requests with command level signature will be submitted by command CMOs and will include:

(1) A statement that the major commander has determined that the proposed establishment, utilization of, or participation in a committee is in the public interest in connection with the performance of duties imposed on the Department of the Air Force, and that he has selected or approved the selection of any proposed committee members according to the provisions of this regulation.

(2) The reasons why the formation or use of the committee is in the public interest. This is a key justification, and must be made in the light of the policies on committee management in paragraph 7. The justification also should contain statements (if applicable) that the committee can provide needed talents and services not otherwise available to the Air Force, and a statement that the views of the non-governmental groups or organizations represented thereon are needed, and the reasons why.

(3) A statement indicating the results of the requesting commands having contacted other Government departments and agencies (DOD or otherwise) which may have formed or may be utilizing an advisory committee with similar objectives and activities. The reasons for establishing or utilizing a new committee, rather than affiliating with or participating in an existing committee, must be clearly stated if the objectives and activities of any other Air Force or non-Air Force advisory committee formed or utilized by the Government are similar.

(4) A statement that the committee is an advisory committee.

(5) A list of the proposed membership, including the name of the proposed chairman or the manner in which a chairman will be selected. For those nominees who are full-time, salaried officers or employees of the Government, list name, title, grade, or organization. For other nominees, provide brief biographical statements listing their names; employment; industrial, institutional, Governmental or other affiliations; any other relevant data such as education, special qualifications or skills, and publications (see attachment 5). Biographical information will be handled as personal or privileged information. If it is necessary to contact an individual for biographical data, the person may only be informed that he is being considered for membership on a given advisory committee. However, when individuals are asked to provide data they must be provided with the Privacy Act Statement shown in the box at the bottom of attachment 5 together with the biography format information being requested. (Nominees for Air Force advisory committees must be approved by the Secretary of Defense before being approached officially concerning membership.)

c. Membership of an advisory committee necessarily depends on its functions. For example, in the case of a committee whose sole function is to consider scientific questions, it may be proper to limit the membership to persons with scientific background. However, such a committee should include persons representing different points of view and different types of employment (education, industry, transportation etc.).

d. Whenever feasible, the membership of a committee should include:

(1) Representatives of the public interest.

(2) Representatives from a variety of economic and social groups and geographic areas is desirable. No strict rule of proportional representation of the various types of groups is applicable. However, steps should be taken to insure that, in regard to the selection of advisory committee members, there will be no discrimination solely on the basis of race, color, national origin, religion, or sex.

(e) Requests for membership changes are submitted according to b above; however, required information is limited to the membership data in b(1) and (5) above, for proposed nominees. In addition, include the names of any current members to be replaced; and the reasons for the proposed change. Command CMOs will subsequently provide HQ USAF/DPCX with the names of those approved nominees who have been appointed to committee membership.

NOTE: Once an advisory committee has been established there is no need to advise higher authority on any membership changes which relate to full time Government employees.

26. Committee Charters:

a. For each Air Force advisory committee a charter is required. The establishing directive may serve as the charter if it contains:

(1) The committee's official designation.

(2) The committee's objectives and the scope of its activities.

(3) The period of time necessary for the committee to carry out its purpose.

(4) Organization and official to which the committee reports.

(5) The organization responsible for providing the necessary support for the committee.

(6) A description of the duties for which the committee is responsible, and if such duties are not solely advisory, specify the authority for such functions.

(7) The estimated annual operating cost in dollars and man-years for such committees.

(8) The committee's termination date, if less than 2 years from the date of the committee's establishment.

(9) The date the charter is filed.

b. Duration of Charters. Advisory committee charters will extend for a 2-year period after which renewal will be required. Renewal action will be accomplished by forwarding eight copies of the charter with appropriate changes, if any, to AF/DPCX, prior to 15 November of the year renewal is required. Normally, all charter renewals occur during the same time period; thus if a committee were established between years, a charter renewal would be required even if the committee was in existence for 1 year.

c. No advisory committee will meet or take any action until its charter has been approved by OSD and OMB. When forwarding requests for charter approvals or changes to charters, information will be forwarded no more than 75 days or less than 45 days before the committee convenes or expires and will include the following information:

(1) The nature and purpose of the committee.

(2) A statement that renewal is necessary and in the public interest.

(3) The reasons for the determination.

(4) The committees plan to attain balanced membership.

(5) An explanation of why the committee's function cannot be performed in-house or by an existing advisory committee.

d. Each advisory committee will file a charter complying with Section 9(c) of the Act.

e. Subcommittees of Advisory Committees do not have to be separately chartered if:

(1) All members of the Subcommittee are members of the parent Committee.

(2) The Subcommittee reports to the parent Committee.

(3) The Committees charter indicates that Subcommittees may be formed.

(4) The task(s) of the Subcommittee fall within the scope of the parent Committee's charter.

f. Any Subcommittee that does not meet the above indicated criteria will have to be chartered as a separate Committee and will report separately from the parent Committee.

27. Security/Membership Requirements:

a. When classified or "For Official Use Only" data are submitted (for example, proposals, recommendations, or reports), they will be properly classified and specifically identified according to Air Force guidance.

b. Name checks, security clearances, and any other requirements as a condition of which individuals may serve as committee members or be employed as advisors or consultants are the responsibility of the major command concerned. Command CMOs will insure that such requirements have been complied with prior to any individual's participation in the committees.

28. Advisory Committee Rules. Advisory committees formed or utilized by the Air Force will

BIOGRAPHY FORMAT

Date of Resume (should not be more than 6-months old)

PERSONAL DATA

Name

Name of University or Company
Title
Business Address
Business Telephone

Home Address
Home Telephone
Legal Voting Residence

Date and Place of Birth

Citizenship (If naturalized, give date)

Marital Status

Military Service

Education (Degrees, Schools, Dates)

WORK EXPERIENCE

University or Company Assignments (Title, Organization, Dates, Type of Experience)

Consultant Positions

Membership on Boards or Committees

Membership in Professional and Scientific Societies

PUBLICATIONS

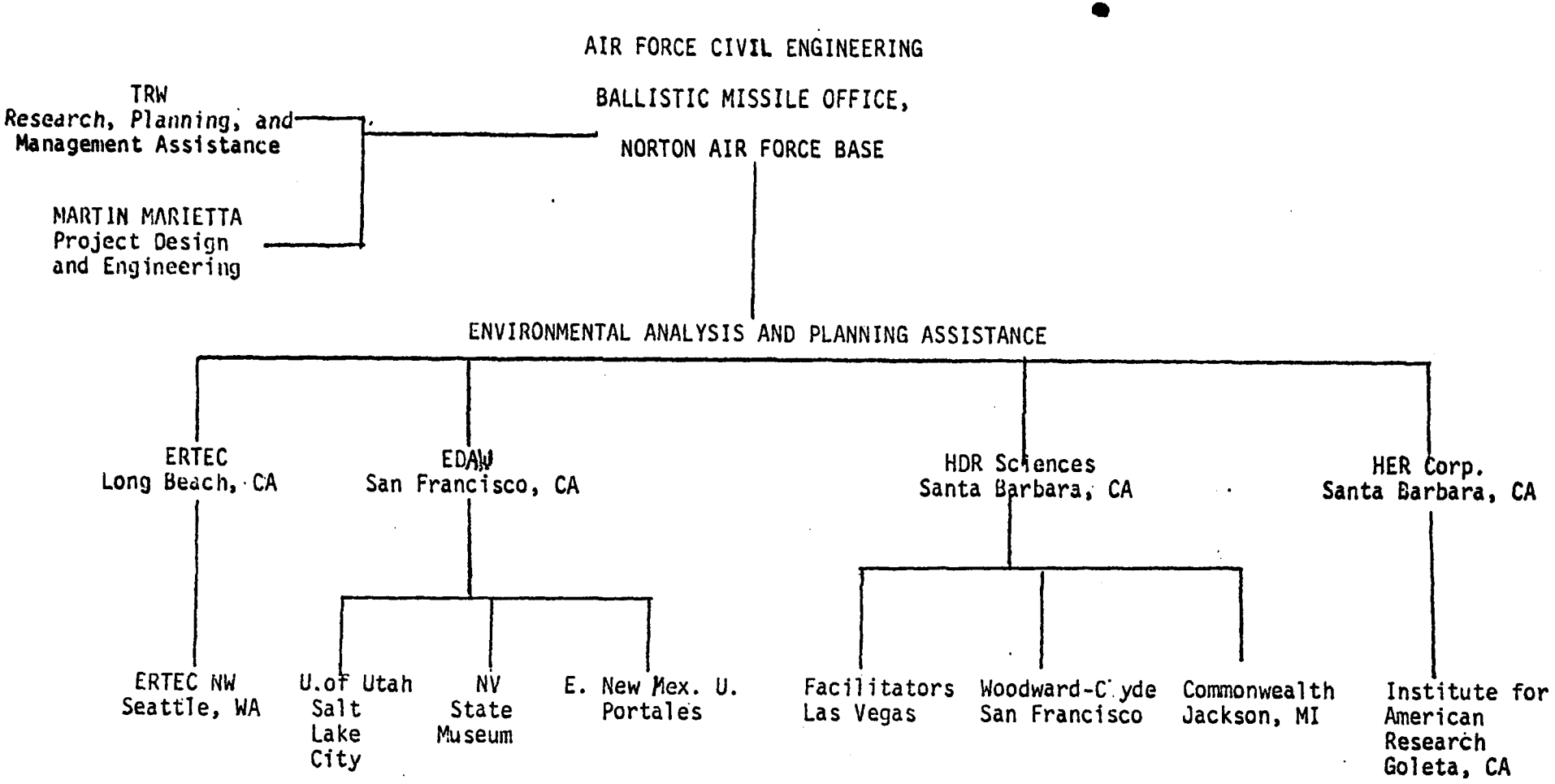
AUTHORITY: Public Law 92-463, Federal Advisory Committee Act, 6 October 1972.

PRINCIPAL PURPOSE: The Office of Secretary of Defense requires that biographical data be furnished on all non-Government personnel nominated to serve on advisory committees. The biographical information is reviewed to assure that proposed nominees are qualified to serve on the committee.

ROUTINE USE: Biographical information is retained for record purposes on individuals approved for service on a committee, upon termination of such service the biographical information is destroyed.

DISCLOSURE IS VOLUNTARY: Disclosure of any information is voluntary, however failure to provide the information will disqualify any proposed nominee.

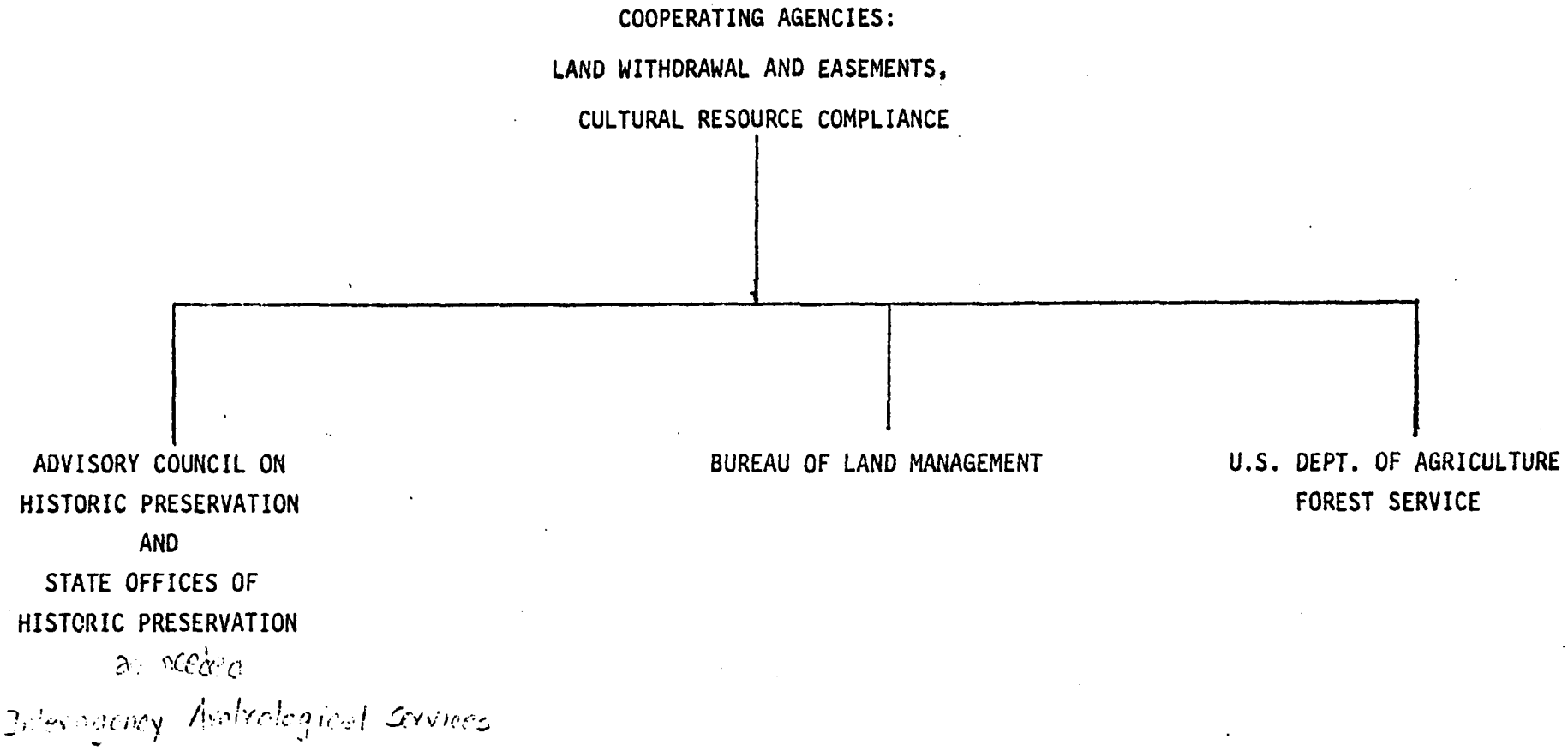
PRIVACY ACT STATEMENT—BIOGRAPHY FORMAT (AFR 11-36)



CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

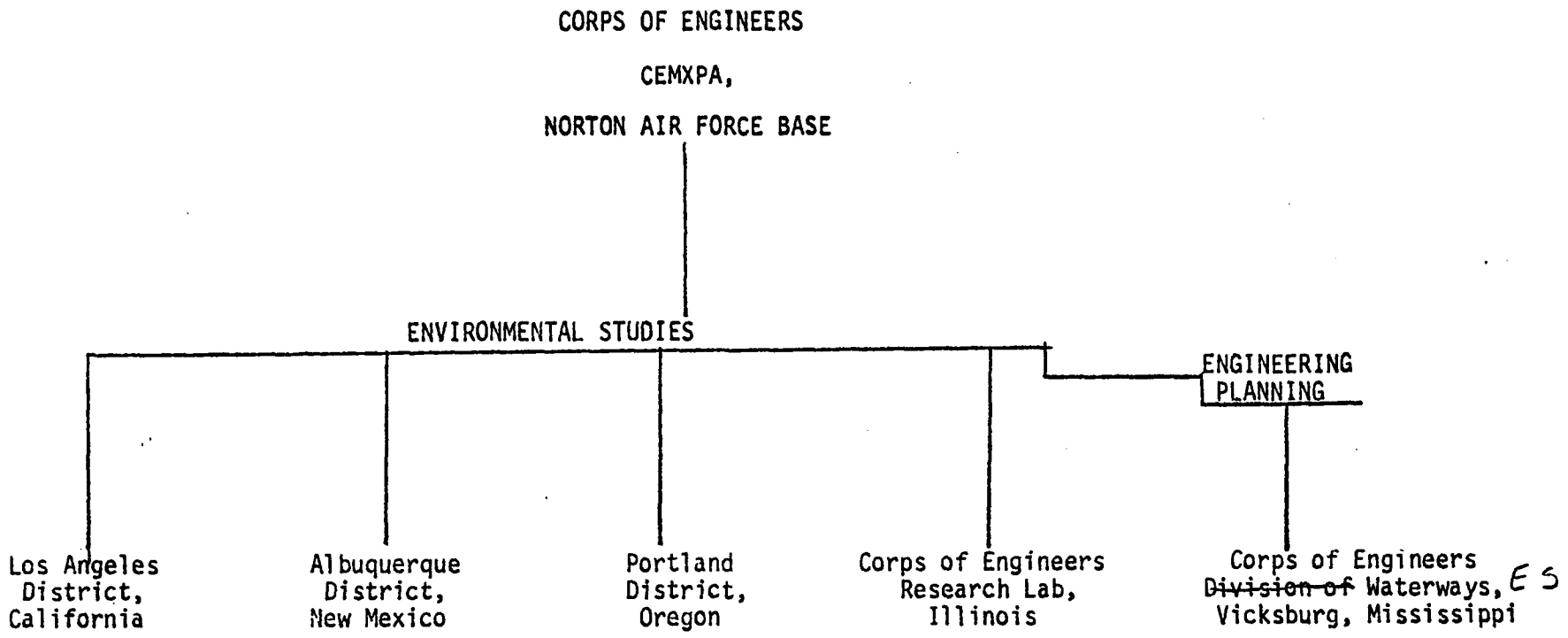
MAY 1981

Figure 1, part 1



CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS
AND PROJECT PLANNING
MAY 1981

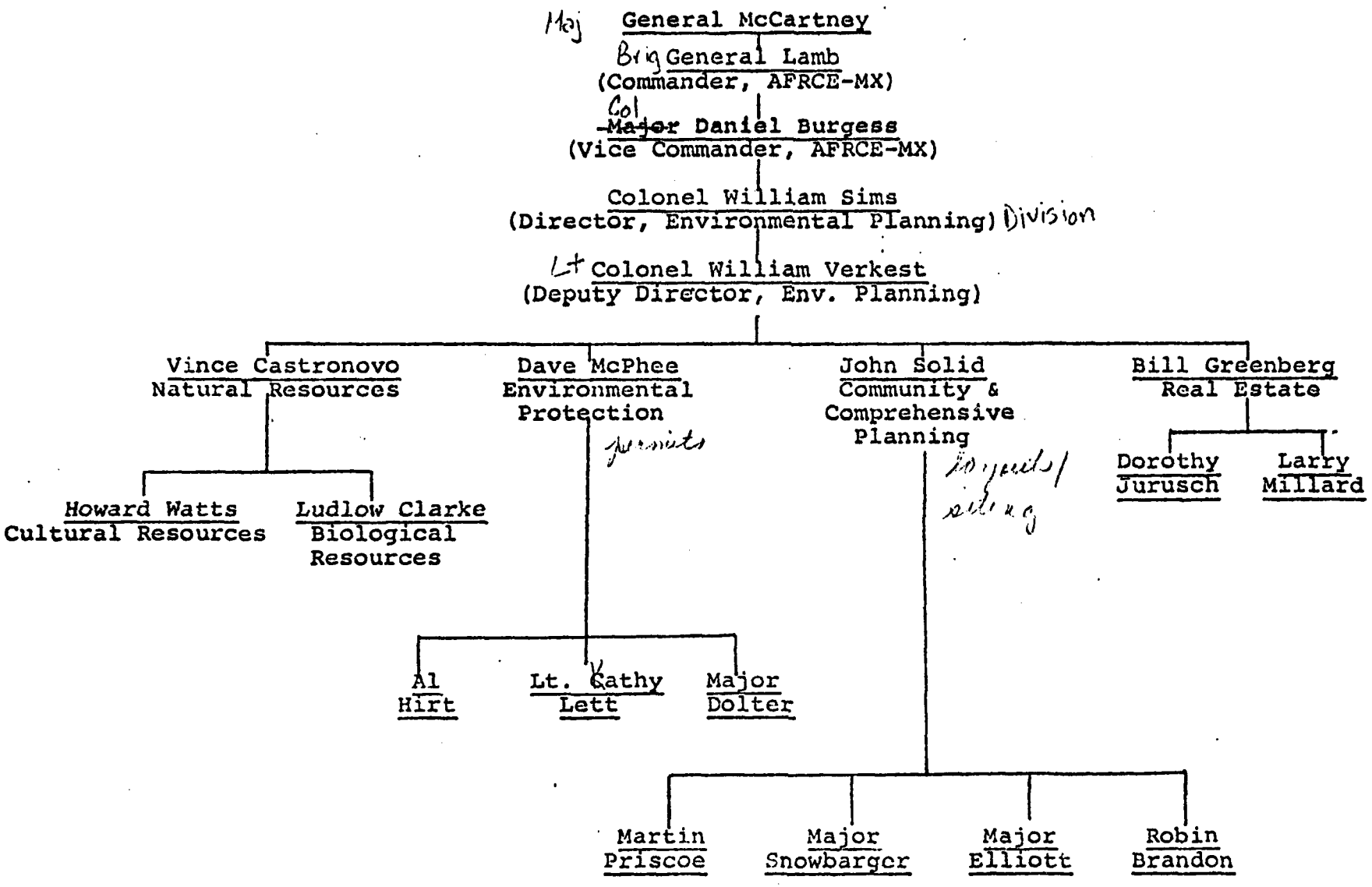
Figure 1, part 2



CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS
AND PROJECT PLANNING
MAY 1981

Figure 1, part 3

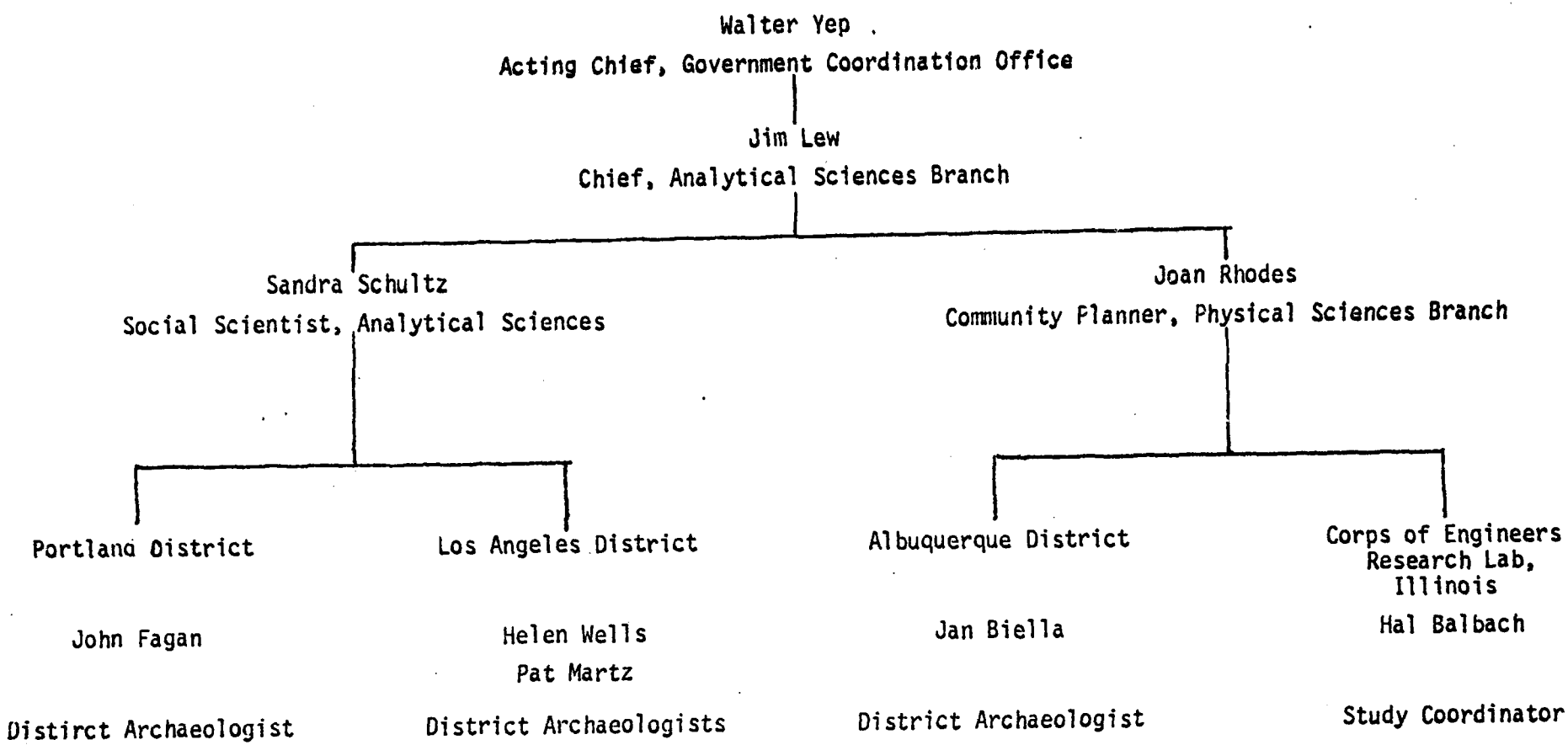
AIR FORCE REGIONAL CIVIL ENGINEERING: M-X PROJECT



ORGANIZATIONAL CHART: AFRCE-MX

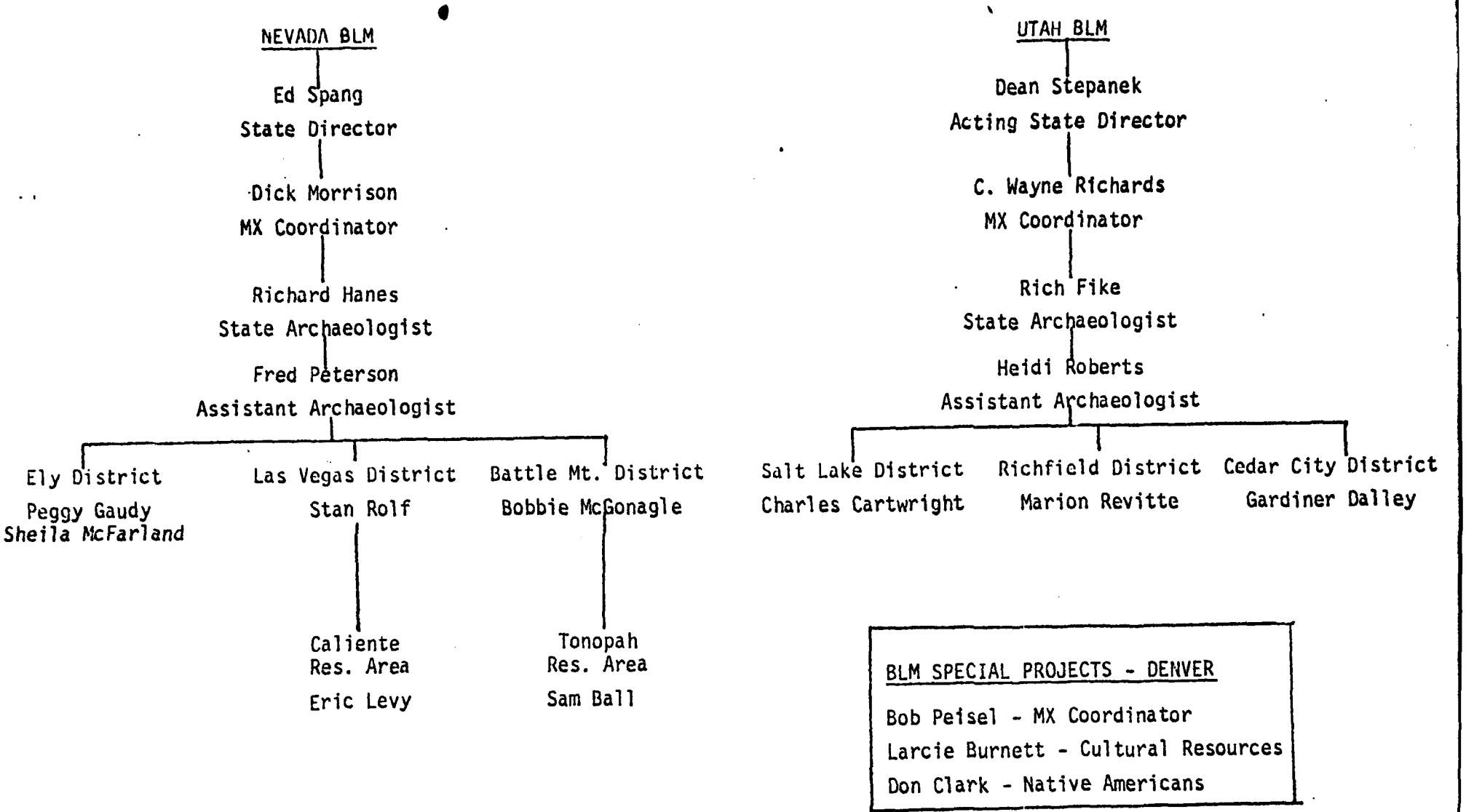
Figure 2

CEMXPA is seeking Division status
districts are cooperating



CORPS OF ENGINEERS MX
COORDINATING OFFICE, & PARTICIPATING DISTRICTS (TIER II ASSESSMENTS)
NORTON AIR FORCE BASE

Figure 3



BUREAU OF LAND MANAGEMENT
MX PROJECT PARTICIPANTS

Figure 4

1.0 ARCHAEOLOGICAL COMPLIANCE PROGRAM

1.1 **Types of study programs**--focus is on defining study requirements, establishing when in the project implementation process particular types of study are required, and identification of relationships between types of study programs

1.1.1 **Research Design**--serves to define a set of appropriate research questions for investigation, provides a framework for the conduct of inquiry, identifies appropriate data gathering methods and procedures for answering research questions, and is periodically revised and updated as results from studies become available. Research design is a critical item for the evaluation of significance, for evaluating impacts, for designing mitigation measures.

1.1.2 **Class I Inventory**--a thorough evaluation of all existing archaeological data, including site records, published and unpublished reports of field studies, and consultation with local/regional experts.

1.1.3 **Class II Inventory** (Regional Sample Survey)--a sample field inventory designed to identify and record, from surface indications and limited subsurface testing, all cultural resources within a portion of a defined area. The Class II Inventory provides a data base for making objective estimates of the nature and distribution of cultural resources within the defined area (i.e. the sampling universe). This type of study is appropriate in the project planning stages in order to provide information about particular valleys or particular types of environmental settings that are likely to be of high archaeological sensitivity. In addition regional sample survey provides essential information about the regional setting of archaeological resources subject to direct impacts and provides information about the nature and distribution of archaeological resources subject to potential indirect impacts.

1.1.4 **Class III Inventory**--the systematic, intensive examination of a defined project area to identify and record, from surface indications and limited subsurface testing, all cultural resources. Project areas for Class III inventories are usually defined by the location and expected land disturbance of a particular proposed action. Class III inventories are conducted in order to assess the potential direct impacts on cultural resources of such a project. Because of these limitations on the definition of

project area, the resulting sample frequently is not representative of the larger region. Thus the significance of the cultural resources encountered must be assessed in relation to models that incorporate existing regional data or are based on supplemental Class II Inventory.

1.1.5 **Significance Assessment**--the Air Force, in consultation with its field contractors and the BLM and SHPOs, must evaluate all archaeological resources discovered during field inventories in terms of their eligibility to the National Register of Historic Places. Two principal types of significance are considered in making National Register evaluations, scientific and cultural significance. The scientific significance of an archaeological resource is generally assessed in relation to a research design that considers problems of general scientific significance, regional and local research problems, and methodologial issues. In significance assessment, attention must also be given to the goal of preserving a representative sample of the full range of archaeological resources, because resources not currently judged to be of significance to regional research problems may become of importance in the future as new information is obtained or new methods are developed. Cultural significance, that is the importance of an archaeological resource to a local community, an ethnic group or to the general public, must also be considered. While scientific significance can be assessed through analysis of data from field inventories as guided by the research design, assessment of cultural significance requires inputs from the other study domains being considered here--history and Native American studies.

1.1.6 **Impact Assessment**--this is the process by which the probable effects of a proposed action on archaeological resources are evaluated. If a property is significant only for its scientific information, and it cannot be avoided or otherwise preserved, the PMOA specifies that a data recovery program should be implemented as a mitigation measure. For those properties that are significant for other than, or in addition to, their scientific information the impact assessment process requires application of the specific criteria of effect that have been developed by the Advisory Council. These criteria are applied by the Air Force in consultation with their field contractors, the BLM, and the SHPOs.

1.1.7 **Mitigation Measures**--these may include a variety of actions such as redesign of project elements in order to avoid a significant archaeological resource,

development of protection measures such as fences, or design and implementation of a data recovery program. The design of mitigation measures is closely tied to the process of impact assessment and it requires consultation between the Air Force, its cultural resource contractors, the BLM, and SHPOs.

1.2 Recommended Study Program--this section considers the current status of the MX Project cultural resource studies and recommends studies that should be planned and implemented between now and the end of FY1982.

1.2.1 Research Design Development- a preliminary research design was prepared by Woodward Clyde Consultants that provides a general structure of inquiry for MX archaeological studies. Only one of the several problem domains they identified was developed in the preliminary design. In addition, the results of the Phase 1 Regional Sample Survey have not been incorporated into this design. Furthermore, geographic subregions within the large MX Project area need to be identified and research problems specific to them developed. Field programs and methods appropriate to particular project requirements can then be developed. Significance criteria for National Register evaluations can also be formalized through the research design process.

1.2.2 Class I Inventory--A substantial amount of existing data has already been assembled by MX contractors, however this data base needs to be centralized at AFRCE for the MX Project and should be updated from several sources not previously consulted(e.g. BLM District Offices, Lost City Museum). The BLM has recently completed Class I Inventories for most of the MX Project area--these reports should be used by Air Force cultural resource contractors to the maximum extent possible in order to reduce redundancy of effort.

1.2.3 Class II Inventory--Due to lack of funding, final reports have never been completed by the field contractors that conducted the Phase 1 Regional Sample Survey. Substantial money and effort has been expended in gathering these data, but without analysis and reports these studies contribute very little to the MX cultural resource assessment process. Completion of analysis and reports is of very high priority, for they are required for research design development and planning of a second phase of regional sample survey. The second phase survey should be planned for the entire MX study region (including the mountain zones). Failure to follow up the first phase of fieldwork in a timely

manner has reduced the opportunity to use regional sample survey data to reduce impacts to archaeological resources in early project design stages, however, regional data are essential for identifying potential indirect impact areas and for providing a regional context for evaluating the significance of archaeological resources subject to direct impacts.

1.2.4 **Class III Inventory**--Class III inventories have been completed in Dry Lake, Pine, and Wah Wah valleys for shelter locations, related facilities, and for a portion of the DTN. Additional survey is currently being planned, but there is inadequate information regarding the types of project facilities or rights-of-way that are to be examined. Apparently cluster roads have not been included in this upcoming program. These and other project elements will require Class III inventories. Similarly there will be Class III inventories required at the Operating Base locations once they have been selected.

1.2.5 **Data Recovery Guidelines**--the PMOA calls for the early development of a set of general guidelines to be followed during data recovery activities. It is necessary to incorporate these general guidelines into the research design process for guidance and justification of specific data recovery proposals and procedures.

1.3 Schedule--to be developed

1.4 Program Implementation Procedures

1.4.1 **Study Team Qualifications**--interim guidelines will be those stated in Appendix II of the Nevada BLM publication entitled **Cultural Resources Survey: General Guidelines.**

1.4.2 **Field Forms**--for Nevada and Utah the Utah Antiquities form is the official form for recording historic and prehistoric sites. For Class II surveys employing quadrats, the sample unit form for the Phase 1 Regional Sample Survey is to be modified to incorporate improvements suggested by Phase 1 field and lab personnel and to meet the research design requirements of the particular Class II survey. For Class II surveys employing transects, the University of Utah transect form is to be used in its present form, or it may be modified to conform to project requirements. All site forms are to be typed, to have photocopies of the appropriate USGS map showing the site location attached, and to have prints of

site and artifact photos attached on continuation sheets. All photographs are to be recorded in the field on standardized photographic records.

1.4.3 Field Procedures--a field procedures manual is currently in preparation. In the interim, the MX Cultural Resources Regional Sample Survey Field Manual prepared by HDR Sciences and the Institute for American Research, and the field procedures guidelines followed by EDAW subcontractors are to serve as procedural guides. Until an MX field procedures manual is assembled and approved, consultation with the Air Force, BLM, and SHPOs regarding field procedures is essential on a project by project basis.

1.4.4 Data Management--The University of Utah will serve as the centralized data management system for MX archaeological studies in Nevada and Utah. AFRCE-MX will develop and maintain a data base in order to provide planning information to MX environmental and construction contractors on a need to know basis.

1.4.5 Data Dissemination--copies of site and sample unit forms are to be sent to the Nevada State Museum by contractors working in Nevada and to the University of Utah and Southern Utah State University by contractors working in Utah. In addition, copies of these forms go to the SHPO, to the appropriate District Office of the BLM, and to AFRCE-MX.

1.4.6 Report Preparation--all MX cultural resource field studies are to result in the preparation of draft and final reports. Reports on all major field studies are to be published in the cultural resource series of the Nevada BLM. Small scale studies will be distributed to major libraries and data repositories and to all those requesting copies from AFRCE-MX. Report preparation guidelines are being developed.

1.4.7 Curation--official repositories for photographs, negatives, photo records, and artifacts collected during MX archaeological studies are as follows:

Nevada--Nevada State Museum, Carson City
Utah--Southern Utah State University, Cedar City
New Mexico--Laboratory of Anthropology, Santa Fe
Texas--

Presently each contractor is to make arrangements with these facilities on a project by project basis. A long term plan for artifact curation is to be developed.

4.0 Field Contractor/Subcontractor Report Preparation Procedures--reports on field studies are to be prepared by the institution, firm, or Air Force agent that conducted the fieldwork

4.1 Field contractor consultation with USAF, BLM, and SHPO regarding field results--initial discussion of significance, impacts, and potential avoidance measures
4.2 USAF determines which avoidance measures are possible
4.3 Field contractor prepares report to assess significance of all cultural resources encountered and identify potential impacts. Draft report incorporates results of Air Force decisions regarding avoidance measures.
4.4 Draft report is reviewed by USAF, SHPO, BLM, and Review Committee
4.5 Based on reviewer comments USAF develops final avoidance measures
4.6 Field contractor prepares final report assessing significance, impacts, avoidance measures, and outlines data recovery program. All National Register eligible properties subject to impacts are documented in accordance with 36 CFR 63
4.7 SHPO comments on determinations of eligibility
4.8 If SHPO concurs with determinations of eligibility, and all cultural resources are eligible for the Register only for their information potential, USAF finalizes its data recovery program plan (Go to Attachment III)
4.9 If any cultural resources are eligible for the Register for reasons other than, or in addition to, their information potential USAF makes a determination of effect in consultation with the SHPO and forwards appropriate documentation required by 36 CFR 800.4(d) to the Advisory Council for comment.

5.0 Advisory Council Consultation

5.1 USAF prepares and submits a Preliminary Case Report requesting the comments of the Council(see 36 CFR 800.13(b)
5.2 USAF notifies the SHPO of this request
5.3 USAF proceeds with the consultation process set forth in 36 CFR 800.6
5.4 Until the completion of the consultation process, the Air Force suspends any actions that may result in impacts to the property under consideration

ATTACHMENT III. STANDARD SEQUENCING FOR DATA RECOVERY PROGRAMS

To be developed

ATTACHMENT II. STANDARD SEQUENCING FOR CLASS III INVENTORIES

1.0 Prepare SOW for field program--to be prepared by USAF, its prime contractor, or its agent, as appropriate

- 1.1 Define proposed Air Force Action
- 1.2 Identify geographic region of potential effect
- 1.3 Identify cultural resource compliance requirements for proposed action--SHPO/BLM consultation advisable
- 1.4 Integrate 1.3 with regional research design
- 1.5 Provide SOW to USAF for review
- 1.6 Provide SOW to BLM, SHPO, Review Committee for review
- 1.7 Assess and incorporate reviewer comments
- 1.8 Release SOW for bid
- 1.9 Resubmit SOW for review by USAF, BLM, SHPO, Review Committee if significant revisions were made
- 1.10 Review of proposals by Air Force, BLM, and SHPO. Procedures to be established on a procurement by procurement basis

2.0 Contractor Implements Field Study

- 2.1 Field contractor reviews existing data for the Class III study area
- 2.2 Field contractor contacts appropriate BLM District Archaeologists--field contractor provides project information and requests information on previous/current field studies
- 2.3 Field contractor consults with previous researchers in the Class III study area as appropriate
- 2.4 Field contractor consults with Native Americans
- 2.5 Field contractor develops research design compatible with MX Regional Research Design and appropriate to the particular Class III study area
- 2.6 Class III Research Design is reviewed by USAF
- 2.7 Field contractor visits BLM District Office prior to initiation of field study
- 2.8 Field contractor implements field study in accordance with standardized field procedures for MX Project (see section 1.4 of Archaeological Compliance Program)

3.0 Air Force Quality Control Field Monitoring

- 3.1 USAF participation in prefieldwork orientation sessions (optional)
- 3.2 USAF on-site visit(s) during field study

4.0 Field Contractor/Subcontractor Report Preparation Procedures--reports on field studies are to be prepared by the institution, firm, or Air Force agent that conducted the fieldwork

4.1 Field contractor consultation with USAF, BLM, and SHPO regarding field results--initial discussion of significance of resources encountered and review of outline for draft report

4.3 Field contractor conducts analysis to assess significance of all cultural resources encountered and to develop predictions about unsurveyed areas within the sampling universe. Draft report presents results of analyses and recommends research design refinements/modifications. Indirect impact analyses are reported if that was a compliance goal of the Class II Inventory (see 1.1).

4.4 Draft report is reviewed by USAF, SHPO, BLM, and Review Committee

4.5 Based on reviewer comments field contractor prepares final report

4.6 After final review report is published in Nevada BLM cultural resource series

ATTACHMENT I. STANDARD SEQUENCING FOR CLASS II INVENTORIES

1.0 Prepare SOW for field program--to be prepared by USAF, its prime contractor, or its agent, as appropriate

- 1.1 Define compliance and research goals for proposed Class II study
- 1.2 Identify geographic region of proposed Class II study
- 1.3 Prepare draft SOW (include written statements from 1.1 and 1.2 in SOW)
- 1.4 Provide SOW to USAF for review
- 1.5 Provide SOW to BLM, SHPO, Review Committee for review
- 1.6 Assess and incorporate reviewer comments
- 1.7 Release SOW for bid
- 1.8 Resubmit SOW for review by USAF, BLM, SHPO, Review Committee if significant revisions are made
- 1.9 Review of proposals by Air Force, BLM, and SHPO. Procedures to be established on a procurement by procurement basis.

2.0 Contractor Implements Field Study

- 2.1 Field contractor reviews existing data for the Class II study area
- 2.2 Field contractor contacts appropriate BLM District Archaeologists--field contractor provides project information and requests information on previous/current field studies
- 2.3 Field contractor consults with previous researchers in the Class II study area as appropriate
- 2.4 Field contractor consults with Native Americans
- 2.5 Field contractor develops research design compatible with MX Regional Research Design and appropriate to the particular Class II study area
- 2.6 Class II Research Design is reviewed by USAF, BLM, SHPO, Review Committee
- 2.7 Field contractor visits BLM District Office prior to initiation of field study
- 2.8 Field contractor implements field study in accordance with standardized field procedures for MX Project (see section 1.4 of the Archaeological Compliance Plan).

3.0 Air Force Quality Control Field Monitoring

- 3.1 USAF participates in prefieldwork orientation sessions (optional)
- 3.2 USAF conducts on-site visit(s) during field study

I Native American Compliance Program

A. Types of Study Programs

Regional Program Plan

The program plan will establish methodlogies and procedures for evaluating the cultural and historic significance of Native American resources which are eligible for the National Register and/or protected by the American Indian Religious Freedom Act.

Literature Search

Background studies consist of a review of existing ethnographic and ethnohistorical literature on the study area region, and of existing archaeological site records which contain information on cultural resources in the deployment area of potential significance to Native Americans.

Regional Survey

Ethnographic field studies at Indian reservations and colonies in and near the deployment area are conducted to determine the nature, known and projected distribution, significance, and contemporary use patterns of cultural resources in the potentially impacted region.

Site-Specific Surveys

Site-specific surveys consist of on-site inspections of areas slated for construction by ethnographer-Native American study teams to record cultural resources subject to potential direct and indirect impacts.

Significance Assessment

Assessment of the significance of Native American resources in the deployment area requires the development, in consultation with affected tribal groups, of relevant and defensible criteria for establishing the relative importance of tangible and intangible resources for the maintenance of cultural integrity. These guidelines must be in accordance with cultural and historic significance determinations relevant to National Register eligibility and religious freedom.

Impact Assessment

The impact analysis has two major components. Assessment of potential impacts on tangible cultural resources involves the comparison of known resource distributions with project layouts. Potential project impacts on intangible cultural resources, such as those which jeopardize religious expression or ethnic integrity, must be assessed through a consideration of the cumulative effects of significant resource loss on Native American communities.

Mitigation Measures

Mitigation programs consist of the development of measures, in consultation with affected Native American groups, which facilitate avoidance or minimization of deleterious project effects on tangible and intangible cultural resources.

B. Recommended Study Program

Program Plan Development

There is an immediate need for the development of standardized procedures for identifying and assessing the relative significance of Native American cultural resources. The accuracy and validity of such procedures or guidelines is dependent upon the establishment of a successful dialogue and working relationship between affected Native American groups, participating agencies, and M-X contractors.

Literature Search

It is recommended that background studies initiated with the M-X DEIS be updated to include the results of preliminary regional ethnographic surveys, Class I and II archaeological inventories, and tribal comments on the DEIS. Such studies should be expanded to include the unpublished data of ethnographers with areal specializations in the deployment area, Native American tribal archival data, and additional published works (particularly for the Texas/New Mexico siting alternative).

Regional Survey

Finalization and completion of the FY 80 Nevada/Utah ethnographic survey are recommended as high priorities. Finalization of the initial study report includes tribal group and agency comments and the identification of significant data gaps. Completion of the regional ethnographic survey is required to determine the range of cultural resources in the deployment area, their significance to Native Americans, and contemporary use patterns. Since no comparable data are currently available for the Texas/New Mexico siting option, contacts with the tribal governments of affected Native Americans in this region and initiation of a regional ethnographic survey are recommended.

Site-Specific Surveys

It is recommended that on-site inspection of proposed construction areas in the IOC valleys, OB sites, construction camps, borrow sites, and other disturbance areas be conducted by study teams composed of ethnographers and local Native Americans. Such studies should be a routine component of any and all cultural resource inventories to ensure the identification and recordation of Native American resources and documentation of their historic and cultural significance to local peoples.

Data Recovery Guidelines

Established procedures for data recovery prior to ground disturbance should be developed jointly between cultural resource and land management agencies and affected Native American groups. Such procedures should include prior notification to tribal governments of data recovery programs and reflect a sensitivity for Native American religious concerns. These mitigation guidelines are a logical extension of consultation forums initiated for program plan development.

Program Implementation Procedures

A. Consultation Requirements

Tribal Governments

As official governing bodies of sovereign nations in a special trust relationship with the United States, the duly-elected tribal councils/business councils of affected Indian reservations and colonies in the deployment area serve as legal representatives and liasons with external agencies and interest groups. Consultations required by existing cultural resource legislation which relate to Native American participation in the inventory, impact assessment, and mitigation processes must therefore be coordinated with these bodies.

Native American Traditional Leaders

In addition to consultation with tribal governments, implementation of the American Indian Religious Freedom Act requires coordination with traditional religious leaders within Native American communities to determine the nature, distribution, and significance of sacred cultural resources, to assess potential impacts on these resources, and to develop suitable mitigation measures.

Cultural Resource Management Agencies

Procedures for coordination with the State Historic Preservation Officers and Bureau of Land Management for the determination of effect on Native American cultural resources and the eligibility of these resources for the National Register are identical to those followed for the archaeological compliance program.

B. Field Procedures Guidelines

Study Team Qualifications

Due to the culturally unique and often sensitive nature of many Native American cultural and sacred resources, data gathering is successful only when conducted by a research team

which enjoys the confidence of both the academic and Indian communities. It is therefore recommended that: (1) Native Americans be consulted on the selection of the ethnographic survey contractor, (2) that this selected contractor conduct all cultural resource studies relating to Native Americans for M-X contractors, either sequentially or simultaneously, and (3) that the direct participation of local Native American cultural resource specialists on study teams be instituted for site-specific surveys.

Field Forms

Since data gathering on Native American cultural resources is accomplished through ethnographic interviewing, field forms distinct from those employed in archaeological surveys are required. Forms developed in the context of DEIS preliminary regional surveys should be evaluated and revised in light of research team recommendations and tribal comment. Revised field forms should be universally applied by research teams in subsequent studies to permit the standardization of data.

Field Procedures

Minimal guidelines for ethnographic data gathering on Native American cultural resources include: (1) initial contact with tribal governments by research team members for information dissemination on study goals and the receipt of permission to interview tribal members, (2) consultation with all tribal members knowledgeable in traditional matters and cultural resources, and (3) establishment of a tribal review procedure for evaluation of study findings prior to finalization of research reports.

Photographic Documentation

The systematic photographing of cultural resource sites, a standardized procedure in archaeological inventories, should be extended to Native American surveys as well. A photographic record of sites which are culturally significant to Native Americans will document their physical properties and condition prior to potential direct and indirect impacts associated with the M-X project.

C. Data Management

AFRCE

There is an immediate need for the establishment of a centralized data repository for cultural resources of all types at AFRCE. Such a repository will facilitate data analysis, and will provide rapid access to Native American cultural resource information for planning purposes. Since

certain categories of Native American sites are regarded as sacred, and their locations divulged only with guarantees of informant or data confidentiality, provisions for nondisclosure of such information to the public must be developed.

BLM

Dissemination of Native American cultural resource data to the Bureau of Land Management has not occurred to date. Preliminary field studies indicate a general lack of faith exists in the Indian community regarding the ability of the BLM to maintain Native American site data confidentiality. Further consultation between this agency and tribal governments is necessary to ensure such procedures are followed.

Tribal Archives

The highly sacred nature of certain Native American cultural resources often precludes their discussion with non-Indians. Reluctance to disclose information on either the precise nature or location of such resources is guided both by cultural sanctions and the fear of potential site damage or desecration. Tribal archives provide a data repository for the preservation of traditional knowledge for future reservation members. Such information, to which public access is controlled by the tribes, may be disclosed on a selective basis to project planners if the resource appears threatened by direct or indirect disturbance, or if procedures which guarantee data confidentiality can be developed by AFRCE and the BLM in consultation with the tribes.

D. Data Dissemination

Planning Information for DOD Contractors

Centralization of deployment area Native American cultural resource data at AFRCE will allow immediate access by DOD contractors for planning purposes. Additionally, an ongoing consultation program between AFRCE and tribal governments will facilitate the coordination of data gathering efforts by contractors, and provide a mechanism for the dissemination of information on highly sensitive resources from the tribes to AFRCE on a case-by-case or site-specific basis.

Scientific and Public Information Dissemination

Since the gathering of Native American cultural resource information in M-X ethnographic studies is properly represented to the tribes as a planning tool, and since much of this information is regarded by the tribes as proprietary, site-specific data disclosure to the scientific community and general public should be granted only at the discretion of the tribes in question. The official tribal position on data disclosure for specific sacred and secular resources identified by reservation

members may be indicated in the tribal review of draft ethnographic field reports.

E. Curation

Data Repositories and Photographs

Acceptable data repositories for Native American cultural resource information is an important area for negotiation between AFRCE, the BLM, and affected tribes. As noted above, the secular or sacred nature of resources and data confidentiality are important issues.

Artifacts

Consultation with affected tribes is urgently needed for the development of mutually agreeable mitigation measures. This is particularly relevant to data recovery programs which may involve the disturbance of highly sensitive resources, such as human skeletal remains, sacred artifacts, and organic and inorganic materials which have traditional religious significance. Curation of artifacts at tribal museums is a potential mitigation measure, although substantial funding would be required for the development of reservation facilities which meet BLM requirements for artifact transfer to local Native American groups.

ATTACHMENT I STANDARD SEQUENCING FOR REGIONAL ETHNOGRAPHIC SURVEYS

1.0 Prepare SOW for Regional Program - to be prepared by USAF, its prime contractor, or its agent, as appropriate.

- 1.1 Define compliance basis for the study and relation to environmental impact process, land withdrawal, or other actions.
- 1.2 Define special legal considerations arising from trust status which may influence the scope of study.
- 1.3 Determine what level of integration with archaeological/historical Class II inventories is required.
- 1.4 Identify region, colonies, reservation, and traditional communities in off-reservation area relevant to the proposed actions and studies.
- 1.5 Prepare draft SOW.
- 1.6. Provide draft SOW to USAF for review.
- 1.7 Provide SOW to cultural resource management agencies, PMOA Review Committee, the BIA, and pertinent tribal governments for review.
- 1.8 Assess and incorporate reviewer comments and resubmit SOW for review if appropriate.
- 1.9 Release SOW for bid.

2.0 Contractor Implements Ethnographic Study

Contractor actions include:

- 2.1 Review of existing data.
- 2.2 Consultation with appropriate cultural resource management agencies and tribal governments and integration of information on previous and current related investigations.
- 2.3 Consultation with prior researchers and contractors as appropriate.
- 2.4 Development of a study plan compatible with the Native American studies regional program plan and procedures for significance assessment and consultation.
- 2.5 Submission of study plan for review by cultural resource management agencies, USAF, tribal governments, traditional leaders and review committee.
- 2.6 Incorporation of comments as appropriate
- 2.7 Consultation with local BLM and BIA offices prior to initiation of field study.
- 2.8 Implementation of field study in accord with standards and procedures developed in the PMOA management plan.

3.0 Air Force Quality Control Field Monitoring--To maintain the quality of studies, the USAF or its designated agent or contractor should:

3.1 Participate in pre-fieldwork orientation sessions.
3.2 Conduct limited on-site visits during field study.
3.3 Revise procurements as required if significant problems arise in completing studies as defined in the SOW.

4.0 Ethnographic Subcontractor Report Preparation Procedures--Reports should be prepared by the institution, subcontractor, or USAF agent who conducted the ethnographic fieldwork. The steps to be followed in tne preparation of reports include:

4.1 Consultation with cultural resource management agencies and tribal governments regarding field results - initial discussion of the significance of resources encountered and review of draft report outline.

4.2 Analysis of tne data to assess the significance of all cultural and heritage resources identified and to assess concerns relating to the Native American Religous Freedom Act. Analysis should emphasize areas and topics requiring further study. Draft Report presents results and recommends modifications necessary to implement Class III (site specific) inventory and mitigation planning.

4.3 Draft report is reviewed by cultural resource management agencies and tribal governments and traditional leaders as appropriate.

4.4 Comments are incorporated during preparation of final report.

4.5 After final review, report is published in appropriate ethnographic cultural resource series.

STANDARD SEQUENCING FOR SITE SPECIFIC INVENTORIES

1.0 Prepare SOW for Regional Program - to be prepared by USAF, its prime contractor, or its agent, as appropriate.

1.1. Define compliance basis for the study and relation to environmental impact process, land withdrawal, or other actions.
1.2 Define special legal considerations arising from trust status which may influence the scope of study.
1.3 Determine what level of integration with archaeological/historical Class III inventories is required.
1.4 Based on the Class II study and other information, identify region, colonies, reservation, and traditional communities living off reservation relevant to the proposed actions and studies.
1.5 Prepare draft SOW.
1.6. Provide draft SOW to USAF for review.
1.7 Provide SOW to cultural resource management agencies, PMOA Review Committee, the BIA, and pertinent tribal governments for review.
1.8 Assess and incorporate reviewer comments and resubmit SOW for review if appropriate.
1.9 Release SOW for bid..

2.0 Contractor Implements Ethnographic Study--Contractor actions include.

2.1 Review of existing data from Class II inventory.
2.2 Consultation with appropriate cultural resource management agencies and tribal governments and traditional leaders integrating information on previous and current related investigations.
2.3 Consultation with prior researchers and contractors as appropriate.
2.4 Development of a study plan compatible with the Native American studies regional program plan and procedures for significance assessment and consultation.
2.5 Submission of study plan for review by cultural resource management agencies, USAF, tribal governments, traditional leaders and review committee.
2.6 Incorporation of comments as appropriate.
2.7 Consultation with local, BLM and BIA offices prior to initiation of field study.
2.8 Implementation of field study in accord with standards and procedures developed in the PMOA management plan.

3.0 Air Force Quality Control Field Monitoring--To maintain the quality of studies, the USAF or its designated agent or contractor should:

3.1 Participate in pre-fieldwork orientation sessions.
3.2 Conduct limited on-site visits during field study.
3.3 Revise procurements as required if significant problems arise in completing studies as defined in the SOW.

4.0 Ethnographic Subcontractor Report Preparation Procedures--Reports should be prepared by the institution, subcontractor, or USAF agent who conducted the ethnographic fieldwork. The steps to be followed in the preparation of reports include:

4.1 Consultation with cultural resource management agencies and tribal governments and traditional leaders regarding field results - initial discussion of the significance of resources encountered, impacts anticipated, and potential mitigation measures.
4.2 USAF determines what avoidance measures can feasibly be implemented.
4.3 Analysis of the data to assess the significance of all cultural and heritage resources identified and to assess concerns relating to the Native American Religous Freedom Act. Analysis should emphasize comprehensive significance assessment, detailed impact assessment, and development of mitigation alternatives. Draft Report incorporates results of USAF decisions regarding avoidance measures. The draft report should contain mitigation planning information concerning all areas to be impacted.
4.4 Draft report is reviewed by cultural resource management agencies, review committee, and tribal governments and traditional leaders as appropriate.
4.5 Comments are incorporated during preparation of final report. The contractor's final report should assess significance, impacts, avoidance measures, other mitigation measures, and should outline a program for integration of Native American concerns with archaeological data recovery programs. All National Register eligible properties subject to impacts should be documented in accordance with 36 CFR 63.

5.0 Compliance Coordination for National Register Eligible Properties--Native American cultural or heritage sites eligible for inclusion in the National Register probably will have significance beyond their information potential and archaeological research values. For this reason, Advisory Council consultation will be required. The most expedient approach to this consultation would involve the following steps:

5.1 USAF consults with appropriate cultural resource management agencies and makes a determination of effect. Documentation of the effect determination should be prepared in accord with 36 CFR 800.4(d). This documentation should contain all the information relevant to each major construction increment to be accomplished during the forthcoming fiscal year.

5.2 A single Preliminary Case Report requesting the comments of the Council (see 36 CFR 800.13(b)) should be prepared. This case report should be as comprehensive as possible.

5.3 USAF notifies SHPO of the request for comments from the Council.

5.4 Until the consultation process is concluded, actions which may result in impacts to the eligible property should be deferred.

2.0. HISTORY/ARCHITECTURE/COMMUNITY STUDIES COMPLIANCE PROGRAM

2.1. Types of study programs

2.1.1. Research Design. There are three basic steps to any research design or, more generally, planning program. These are:

2.1.1.1. identification of projects goals or a problem to be solved. For the history/community studies compliance program, the principal goals are: 1) the identification of historical, architectural, and/or socio-cultural resources that may be affected by MX deployment; 2) determining the significance of these resources and, more specifically, their evaluation for inclusion on the National Register; and 3) the protection/mitigation of these resources.

2.1.1.2. determination of the steps or measures to be taken to achieve these project goals. For history/community studies, these steps include: 1) review of existing literature and other background studies; 2) consultation with regional experts and authorities; 3) the development of significance criteria that are suitable to the project area and its cultural resources IN consultation with the local community; 4) documentation of architectural values and other field studies; 5) significance assessment; 6) impact assessment; 7) the development of practical and effective mitigation measures, in cooperation with local populations; 8) plans for monitoring the implementation of these measures.

2.1.1.3. planned re-evaluation of the program at key stages in its implementation. A number of factors may develop which call for changes in the research design/management plan. As the body of cultural resources data develops, for example, new data needs may also appear; or changes in the MX deployment picture may demand the inclusion of other areas in the planning process. This third step in the planning process is when the project goals and the steps necessary to achieve those goals are further refined. It is important to point out that this evaluation process should employ an explicit data analysis program.

2.1.2. Background Studies

As soon as a basic set of project goals have been identified, background studies are normally the first

type of data gathering/synthesizing program to be initiated. For history/community studies, this type of research would involve the use of written materials, including both primary (diaries, letters, journals, autobiographies, deeds, permits and other regional records) and secondary (histories and existing background studies) sources, other documentary sources such as photographs and maps, and consultations with regional experts in history, architecture, and social anthropology.

The main objectives of these studies are to identify gaps in the existing data base, to assist in the formulation of significance criteria, and to provide contextual information on which significance evaluations can be based. It would be appropriate to organize these on a regional basis, rather than a chronological or topical basis, for example.

These background materials differ in terms of cost/benefit ratios. Thus it would not be unusual for some preliminary background investigations to be based on secondary source material and expert consultations, followed by more detailed research with primary materials. It is likely that some preliminary field programs would be initiated before studies of all relevant background materials are completed.

It is important that these background studies be closely aligned with the research design/planning process. This demands that the background studies be designed so that they will contribute toward achievement of the project goals. Additionally, the results of these studies must be used to revise and refine the research design when this is called for.

The field study programs should be based on the existing data reviews to a maximum extent. Moreover, since these programs are likely to be multi-stage in character, future stages should be built upon the results of earlier stages.

2.1.3. Field Studies

Field studies involve on-the-spot documentation of historical, architectural or socio-cultural resources. The methods appropriate to these field studies are: i) on-site written and photographic recordation of buildings and other architectural properties; ii) neighborhood surveys; oral history and other interviewing; iii) archaeological survey and testing.

As with the background studies, these different types of field investigations also differ in terms of the

ease with which they may be performed and their relative contributions to the project goals. These factors should play an important role in scheduling and other prioritizing.

It should be pointed out that many significant cultural resources in the history and community studies areas may not be easily observed through a cursory public reconnaissance. These include aspects of material culture found among the personal possessions of area residents, folklore, aspects of social organization and kinship, subsistence methods and other practices and techniques, and so on.

The field studies should be conducted by qualified researchers, using an established set of measurement and other procedures and criteria, to ensure comparability across studies.

2.1.4. Significance Assessment. There are three basic steps for a significance assessment in history/community studies. These are:

2.1.4.1. determination of appropriate units for significance evaluation. Such units may be buildings, sites, structural features, records, objects or other artifacts, districts or other spatial units.

2.1.4.2. identification of significance criteria suitable to the study area. This will involve use of National Register eligibility criteria, consultation with regional experts and authorities, evaluations of data from the background and field studies, and interviewing or using other means for assessing values attached by local populations (i.e. "cultural significance").

2.1.4.3. application of the significance criteria to the assessment units. This requires a unit by unit evaluation with respect to the various significance criteria. Eligible National Register properties should be clearly differentiated.

2.1.4.4. development of sensitivity maps or other graphic depictions of significance which may be used directly in the impacts assessment.

2.1.5. Impact Assessment. Impacts assessment is basically a process of comparing project impact areas with resource locations. It requires a sensitivity, however, to the kinds of effects that a particular construction or activity will have on a particular kind of cultural resource. This, in turn, demands an understanding of

the forces or factors operating to maintain the resource in its present condition and what alterations in those forces or factors are likely to mean for the resource. Obviously, when one is dealing with currently-used buildings, sites or objects, these forces are quite different, more complex, and often more fragile than in the case of abandoned cultural or historic remains. It should also be noted that, under the proper conditions, some impacts might actually be beneficial to the preservation of particular resources (For example, population growth might permit the rehabilitation and adaptive reuse of more historic buildings, as museums, homes, offices and so on). In considering types of impacts, it is particularly important to differentiate between resources located in inhabited versus uninhabited areas.

In the case of direct project impacts, assessment of impacts consists of overlaying project and resource locations and counting or otherwise measuring the volume of direct impacts that will result, again with a sensitivity to the kinds of impacts that given activities will have for specific resource types.

With indirect impacts, the situation is much complicated by the fact that there is no concrete measure of such indirect project effects. Rather, models of indirect impacts must also be developed. Such models are normally based on permanent and temporary population figures (including recreational and other travel visitors), access routes, and distance-decay assumptions regarding impacts. Once again it is important to determine the type or degree of impact that a particular activity will have on given types of cultural or historic resources.

2.1.6. Mitigation Measures

A variety of mitigation measures are appropriate to the various kinds of cultural resources that belong to the history/community studies area. These include curation, exhibition, avoidance, community planning, study, restoration, rehabilitation, adaptive reuse, interpretation and educational programs, data recovery, design guidelines for new construction, and so on. In the case of objects or buildings whose significance rests with their continued use, mitigation might involve measures such as socio-economic aid to offset other project effects which may threaten such continued uses.

The mitigation program should also include the establishment of criteria for applying these various mitigation alternatives. It would be appropriate to

conduct as much prior-planning in this area as possible, in consultation with the community and local/regional planning agencies, to ensure that the mitigation program is cost effective and that the measures used in any area complement rather than detract from one another.

An integral part of the mitigation plan should be the establishment of monitoring procedures to be used to ensure compliance with the mitigation program, and contingency measures in the event of non-compliance.

2.2. Recommended Study Program/FY82

2.2.1. Research Design Development. Research design development is the first and most crucial step recommended for a FY 82 study program. Separate designs for each of the potentially affected study areas should be completed. These designs should include the following elements:

2.2.1.1. the preparation of a general research problem or focus, within which more specific research designs may be oriented and developed. This design identifies the problem domains that are to addressed in subsequent research phases, for example, historic settlement, the development of economic networks.

2.2.1.2. a clear statement of overall project objectives, including those that cannot be met in this phase of study.

2.2.1.3. identification of those particular objectives which will be met during this phase. Given the status of the history/community studies compliance program, it is expected that the FY 82 research design will place a major emphasis on:

1. background studies, particularly the coordination of existing Class I inventories, National Register district nominations, and other technical secondary sources, with the goals of identifying data gaps and of establishing a standardized format for data collection, synthesis, evaluation and storage.
2. proposed OB and IOC areas
3. field reconnaissance for architectural values
4. development of a data management system

2.2.1.4. a rationale as to why these specific objectives were selected for inclusion during this phase, while others were not. An important part of this rationale should be an explanation of how this phase of work will link with and contribute

to the implementation of subsequent phases.

2.2.1.5. a statement of procedures to be used to achieve these objectives, including background research, field studies, consultations w/regional experts, and so on, as appropriate.

2.2.1.6. a discussion of anticipated results and how these will serve the stated objectives

2.2.1.7. a program timetable

2.2.2. Background Studies

More specific identification of background studies for FY 82 will need to wait until a research design has been finalized. The following outline is suggested for r[illegible]

2[illegible]1 Regional level studies will include 1) a c[illegible]al/historical overview of the potentially af[illegible] region, 2) an architectural overview that dis[illegible]s architectural style, function, quality, and integrity that characterizes the utilitarian, vernacular, and grand architecture of the region under study, and 3) completion of the Class 1 inventory of potential historic properties begun for Nevada/Utah. 2.2.2.2 Community level studies will include 1) research into the developmental history of the community, major historical events, major historical figures, the ethnic/cultural/religious heritage of the community and the history of land-use and architecture as it pertains to this heritage, current land-use and architectural trends, and cultural continuity; 2) research into the current social, financial, and legal infrastructure of the community as it might affect historic preservation; and 3) community perceptions of its historic heritage to evaluate the cultural significance of properties.

2.2.3. Field Studies

These will undoubtedly need to focus on the IOC and OB areas. Until the FY 82 research design is completed, further discussion of these field study programs must also be delayed. An outline of how these studies could proceed is presented for review.

2.2.3.1 Inventory and documentation of historic resources. Three phases of study are proposed. Phase 1 would include a quick reconnaissance survey of the historical and architectural character of the community to define generally building style and function, and potential districts and individual buildings that merit

further investigation. Phase 2 would include the selection and documentation of those districts and buildings considered architecturally and historically significant. Phase 3 would include an archaeological survey of those areas in the community that are expected to be developed to accomodate population growth.

2.2.4. Preservation Planning

This involves the development of a preservation plan for the affected community which incorporates the results of the background studies and the field inventories. The plan would be developed with the full participation of the community and municipal authorities. The plan would consider National Register nominations, maps of significant historic properties and districts, a program for the rehabilitation of historic properties, design guidelines for new construction to enhance the visual continuity and historic character of the community, zoning recommendations to mitigate the effects of growth, archaeological investigations required prior to new construction, and possible reconstruction of historic districts. Community particpation and education programs would continue through the development of the plan. A final report would compile all the information gathered as a result of these studies.

2.2.5. Schedule

The schedule of activities must also be a part of the research design. Needless to say, time is a crucial factor in the compliance program, due to the bearing that MX has on national security, as well as to other considerations.

2.3. Program Implementation Procedures

2.3.1. Consultation Requirements. There are a number of agencies and individuals that should be consulted throughout the implementation of the compliance program, from research design formulation through data collection, evaluation, assessment, design revision, and so on. These include:

1. Advisory Council on Historic Preservation
2. State Historic Preservation Officers
3. Bureau of Land Management
4. Previous researchers and other regional experts
5. Professional societies (regional AIA, historical societies, curators and archivists)

2.3.2. Guidelines and Operating Procedures. The following procedures and guidelines are recommended:

2.3.2.1. Coordination w/research design. Every effort should be made to ensure that any and all field programs are developed in accordance with the current research design, and that the results of these programs are used to the full extent to make revisions to that design.

2.3.2.2. Qualifications of field crews. Field crews should have combined experience and abilities in the following areas: historical archaeology, project area history, architectural history, cultural anthropology, architecture, photography, writing ability, field experience in the project area, experience with the full range of data collection methods identified above.

2.3.2.3. Field Forms. Several important decisions will need to be made regarding field forms, including whether to use existing state forms, to incorporate these as parts of more detailed forms, or to develop alternative ones.

2.3.2.4. Field Procedures and Photographic Documentation. Standardized field procedures must be developed, including procedures for photographic recordation. This should be performed as part of the research design development.

2.3.2.5. *Data Management.* A detailed data management plan should be devised before any additional field data is collected. This plan must identify: the location(s) for the database to reside, the organization of the database, and so on. These determinations are dependent, for the most part, on identifying present and future uses and users of the database and taking into consideration existing data management systems.

2.3.2.6. Data Dissemination. Programs for disseminating information to the following must be developed:

1. Planning Information for DOD Contractors. Guidelines must be developed so that DOD contractors will understand how particular resources must be treated. Locational information, identifying the type of resource involved, must also be provided.
2. Public Information Dissemination. Separate educational programs should be developed for area residents, visitors to the area, and the general public. These should be designed with the objective of decreasing vandalism and collecting, while simultaneously serving

more general educational objectives.

3. Scientific Information Dissemination. This should include the planning of symposia and publications. Other data sharing programs should also be encouraged.

2.3.3 Standard Sequencing for Historical and Architectural Studies

(to be developed)

Native American Federal Legislation

1. Indian Reorganization Act (June 18, 1934) as amended (P.L. 73-383)
   (c. 576, 48 stat 984, codified in 25 USC 461 et seq.)

2. Indian Civil Rights Act (1968)
   (P.L. 90-284, 25 USC 1301-1303)

3. Indian Self-Determination and Education Assistance Act (1975)
   (P.L. 93-638, 25 USC 450a-450n and 451-459e.)

4. American Indian Religious Freedom Act (March 21, 1978)
   (P.L. 95-341, 42 USC 1996)

5. Paiute Indian Tribe of Utah Restoration Act (1980)
   (P.L. 96-227, 25 USC 761 et seq.)

Historic Preservation: Federal Legislation

1. The Antiquities Act (1906) as amended
   (P.L. 59-209, 16 USC 431-433)

2. The Historic Sites Act (1935)
   (P.L. 74-292, 16 USC 461-467)

3. The Reservoir Salvage Act (1950) as amended
   (P.L. 86-523, 16 USC 469-469c)

4. The Historic Preservation Act (1966) as amended
   (P.L. 89-665, 16 USC 470-470m)

5. The National Environmental Policy Act (1969)
   (P.L. 91-190, 42 USC 4321-4347)

6. Protection and Enhancement of the Cultural Environment (1971)
   (E.O. 11593)

7. The Archaeological and Historical Preservation Act (1974)
   (P.L. 93-291, 16 USC 469a-469c)

8. The Land and Water Conservation Act (1976) as amended
   (P.L. 94-422, 16 USC 460 et seq.)

9. The Archaeological Resources Protection Act (1979)
   (P.L. 96-95, 16 USC 470aa-470ll)

10. The National Historic Preservation Act Amendments (1980)
    (P.L. 96-515, 16 USC 470)

Other Pertinent Federal Legislation

1. The Engle Act (1958)
   (43 USC 155 et seq.)

2. The Federal Land Policy Management Act (1976)
   (P.L. 94-579, 43 USC 1701 et seq.)

3. The Tax Reform Act (1976) as amended
   (P.L. 94-455, sec.2124)

4. The Tax Revenue Act (1978)
   (P.L. 95-600, sections 315 and 701)

Historic Preservation: Federal Regulations and Guidelines

1. 40CFR1500 Regulations on Implementing the National Environmental Policy Act Procedures

2. 43CFR1500 Siting/Land Withdrawal Requirements

3. 36CFR800 Procedures for the Protection of Historic and Cultural Properties

4. 36CFR1201(61) Criteria for Comprehensive Statewide Surveys and Plans

5. 36CFR1202(60) National Register of Historic Places

6. 36CFR1204(63) Determinations of Eligibility for Inclusion in the National Register of Historic Places

7. 36CFR1205 National Historic Landmarks

8. 36CFR1208 Historic Preservation Certifications Pursuant to the Tax Reform Act of 1976 and the Revenue Act of 1978

9. 36CFR1210(66) Recovery of Scientific, Prehistoric, Historic, and Archaeological Data: Methods, Standards, and Reporting Requirements: Proposed Guidelines

10. 36CFR1213 Procedures for the Identification and Protection of Archaeological, Historic, and Scientific Properties: Proposed Rule

11. 36CFR1214 Object of Antiquity Definition

12. 36CFR1215 Archaeological Resources Protection Act of 1979; Notice of Permitting Procedures Pending Promulgation of New Regulations

13. Administrative Memorandum No. 6: IAS Procedures for Emergency Discovery Situations (9/12/79)

14. HQ USAF Directive on Historic Preservation (1981)

15. Advisory Council: Guidelines for "Making Adverse Effect" and "No Adverse Effect" Determinations for Archaeological Resources in Accordance with 36CFR800

16. Advisory Council: Treatment of Archaeological Resources: A Handbook (1980)

17. BLM Manual 8100 - Cultural Resource Management

18. Nevada BLM Guidelines

19. Utah BLM Guidelines

20. Forest Service Guidelines

Historic Preservation: State Legislation

Nevada:

1. Preservation of Prehistoric and Historic Sites (1953) (NRS 381.95 to 381.227)

Utah:

1. Utah State Antiquities Act (1953), as amended (1977) (Utah Code 63-18-18, 19, 20, 22, 25, 26)

New Mexico:

1. Cultural Properties Act (1978) (NMSA 18-6-1 through 18-6-17)

Texas:

1. The Antiquities Code of Texas (1977) (TNRC 191.001 through 191.174)

Professional Guidelines

1. Society of Applied Anthropologists Code of Ethics

2. Standards of the Society of Professional Archaeologists (SOPA)

Project Specific Guidelines/Commitments

1. Programmatic Memorandum of Agreement (PMOA)

ATTACHMENT 2

Meeting Minutes, Agendas, Attendance Lists and Handouts for

All Working Group Meetings

MINUTES

Second Nevada/Utah Conference

on

MX Education Impacts and Mitigations

April 3, 1981

1. A list of those present is attached. In addition there was a significant number of observers/visitors who did not sign the roster.

2. Rowan Stutz explained why Superintendent Walter Talbot and Vaughn Hall could not be present and asked that they be excused.

3. After introductions Denise Lindberg, Utah State Office of Education, and Wendell Newman, Nevada Department of Education, shared the highlights of their respective written reviews of the DEIS from an education perspective. Utah's comments had been prepared by a single education review committee while Nevada used three sub-committees: Vocational Education, Higher education, and K-12 education.

4. The issue of the demand for technically trained manpower was raised by both of the DEIS reviews. Bill Trabert, Nevada Department of Education, and Bob Worthington, Utah System of Higher Education were asked to form a special task force to look into the projected needs for trained manpower, survey the extant capability for meeting these needs and recommend what else needs to be done to put Nevada and Utah into a position to respond appropriately to future demands for vocational/technical training at the high school and post high school levels.

   Funds for the support of the work of this task force will be sought from each of the state MX coordinator offices.

   A progress report of the work of this task force will be made at the next meeting.

5. John Roach, Assistant Project Manager, MX Coordinator's Office, Utah, presented an overview of tiered decision making as it is being employed in making the MX basing and development decisions. He pointed out the DEIS was prepared only to facilitate the deployment area selection and land withdrawal/acquisition decisions. This partially explains the lack of specificity and detail regarding education impacts and mitigations.

6. Phil Robison from the local MX Policy Board, told about the work of his group to date. He also presented the Impact Assistance Program that had been prepared jointly by Nevada and Utah, which proposes that MX mitigation funds be appropriated as a block grant to each state and managed by an MX Grant Review Committee in each state.

7. The significance of the impact of MX upon the quality of life in the communities near the deployment site and the concomitant effects upon education were discussed at length. It was felt that educators had a responsibility to help communities prepare for and hopefully head-off the social dislocations and alienations that usually accompany rapid growth in small communities.

David Lundberg, University of Nevada, who has written a paper on this problem, agreed to share his paper and his thoughts about how to deal with this problem with the group at the June meeting.

8. The next meeting was set for June 12 and will probably be held in Las Vegas. Nevada will host the next meeting. Several items for the June meeting agenda were suggested to Wendell Newman,

It was agreed that the pattern of alternating the responsibility for hosting these joint meetings would continue and that in the future the host state would arrange for someone to record the minutes.

April 3, 1981

ROSTER

NAME	STATE	POSITION AND ADDRESS
Wendell Newman	Nevada	Department of Education
Russ McOmber	Nevada	White Pine Co., Supt. P.O. Box 400 E., Ely
Leon Hensley	Utah	Lander Co. School Dist. Supt. P.O. Box 273, Battle Mountain, Nev.
Robert M. Worthington	Utah	St. Board of Regents, 807 E. So. Temple, Salt Lake City
Denise P. Lindberg	Utah	State Office of Education 250 East 5th South, Salt Lake City
Fred Openshaw	Utah	Tintic School District Eureka, Utah
J. Clair Morris	Utah	Superintendent, Iron County
M. Clark Newell	Utah	Superintendent Juab School District, 305 E. 100 No. Nephi, Utah
Sherm D. Ferre	Utah	Clerk-Treasurer, Juab School Dist. 305 E. 100 North, Nephi, Utah
Jack Burr	Utah	Supt. Washington County Schools 189 West Tabernacle St. George, Utah
Glen W. Moyle	Nevada	P. O. Box 24, Eureka, Nevada
Earle Nuttall	Nevada	P.O. Box 116. Eureka. Nevada
Charles P. Lloyd	Utah	Administrator, Educa. Support Services, Utah State Office of Education 250 E. 500 So,, Salt Lake City
Scott W. Bean	Utah	Utah State Office of Education 250 E. 500 So., Salt Lake City
Harold Hiskey	Utah	Dean of Business & Techn. So. Utah State College Cedar City, Utah
John Roach	Utah	Assist. Project Mgr. MX Coord. Office, Salt Lake City
Thurman White	Nevada	Associate Supt. 2832 E. Flamingo

NAME	STATE	POSITION AND ADDRESS
Ted Sanders	Nevada	Department of Education 400 W. King St. Carson City,
Rowan Stutz	Utah	Utah State Office of Education 250 E. 500 So. Salt Lake City, Utah
Warren Holmes	Nevada	State Board of Education, President
Kent Myers	Utah	67 No. 1050 W., Cedar City, Utah
Ken Topham	Utah	Superintendent, Millard School Dist. Box 666, Delta, Utah
Leo Prestwich	Nevada	Lincoln Co. Schools, Box 118 Panaca, Nevada
David Lundberg	Nevada	Research & Educa. Planning Center Rm. 201 College of Education University of Nevada, Reno, Nevada
Kent Hulet	Utah	Director of Elem/Sec. Education P.O. Box 879, Cedar City, Utah
Clarke N. Johnsen	Utah	Superintendent, Tooele Co. Sch. Dist. 66 West Vine Street Tooele, Utah

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson and John Roach

FROM: Ann Keegan

DATE: May 20, 1981

SUBJECT: State of Utah's Strategy and Rationale for Participating in the Bi-State Technical Transmission Working Group

On March 30, 1981 I met with Gene Lambert and Ken Powell of the Utah Department of Public Utilities to discuss the State of Utah's participation in the Bi-State MX Technical Transmission Working Group. There was no written agenda. The discussion is summarized below.

The overall MX system benefits to electric consumers in Utah are marginal, if not negative. The Air Force should be made to pay the incremental cost of providing electricity to the weapon system and operating bases. The rationale is that this is a short-lived project (thirty years or less) surrounded by a lot of controversy and without clear, broad benefits; thus, it can be classified as a speculative venture. However, the requisite generating capacity and transmission system needs to be factored into the general rate base. The utilities do not care who pays as long as they do not have to carry these costs. Furthermore, the small rural elctrification associations will give some or all of their MX loads to the large private utilities. Also, the utilities are aware of the cost pass-throughs to general rate payers.

The Air Force will have to negotiate a rate with each affected utility to cover the costs of constructing additional generating capacity and expanding the transmission system. The negotiated rates for Utah will then be submitted to the Utah Public Service Commission for approval. This is normal utility practice for speculative ventures such as MX, where the existing rate structures are not applicable. Furthermore, the utilities do not have the loads to justify expansion of the transmission line or interconnections (tie-ins).

It is imperative that the State of Utah participate as an active, full member of the Bi-State MX Technical Transmission Working Group in order to consider at the same time the same information that the utilities use to make negotiated rate decisions. The Utah Public Services Commission does not want to create a precedent for MX, such as allowing the MX electric costs to be factored into the

general rate base, or forcing the utilities to carry these costs. This will be a technically complex decision making process; the state can participate now or it can take a considerable amount of time studying the utilities' decisions. The Department of Business Regulation must maintain its prerogative to recommend the best alternative rate to the Utah Public Service Commission.

The general participation as outlined met with the approval of everyone concerned. The Utah MX Coordination Office agreed to fund travel expense so that appropriately qualified professionals from the Department of Business Regulation could represent Utah in the Bi-State MX Technical Transmission Working Group.

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KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach, Paul Cox and Bob McMains

FROM: Ann Keegan

DATE: June 24, 1981

SUBJECT: Follow-up to the May 28th Transmission Coordinating Committee Meeting

On June 12, 1981, Ken Powell and I met in the Conference Room of the Utah MX Coordination Office to discuss the second Transmission Coordinating Committee meeting. The discussion is summarized below.

The utilities' data requests are not being completely answered in a timely manner. The Air Force is continuing to request information from the utilities that is contingent on the utilities receipt of the data requested from the Air Force. The utilities have consistently requested that the Air Force give them data on annual loads by certificated areas, including the service voltage.

We then discussed the GROUND RULES AND ASSUMPTIONS being used by the Air Force to develop their direct load requirements (see attachment 1). The first and second assumptions are most disturbing. The implications of design for backfill, but operations at a baseline, needs to be reexamined. It is necessary to study the load characteristics to see if the conductors change, rather than design and operate the system at two different levels. The rationale for this is not at all clear; these assumptions need to be clarified.

In order to determine reasonableness of the third assumption, it is necessary to know the type of equipment that the Air Force will be using in the DAA and OBTS. Equipment should be listed, as well as hours of use, power ratings and equipment design characteristics. Also, the power factor assumption will affect the rate structure.

Tactical and non-tactical loads (the fifth and sixth assumptions) should be defined. This is Air Force terminology that is not in common use by the utilities. Further, the basis of the tactical/non-tactical load assumptions needs to be provided since they will affect peak supply.

The ninth assumption should be validated by looking at current electric usage in the area. Per capita use will be affected by the number of trailers/mobile homes in use, as well as use of electricity for heat. These will, in turn, affect the diversity between the loads.

The documentation for the tenth and eleventh assumptions should be provided.

The twelfth assumption is presumed without any regard for state and local on-base/off-base housing-policy preferences. A sensitivity analysis should be conducted. It is recommended that direct load requirements be estimated using a lower percentage of personnel and dependents housed on base; this would obviously increase the indirect load requirements.

The thirteenth assumption should be validated by looking at common practices in the area. Electric heating is prevalent because it is economical. Natural gas is generally not available, especially in the vicinity of the OB areas.

The Air Force seems to unaware that it is to their advantage to use the same voltage as UP&L. The Air Force's 14.4 kV/13.8 kV service voltage is atypical for the system (which is 12.5 kV). In the event of equipment failure, the Air Force could readily obtain 12.5 kV equipment from UP&L, which has to maintain a fairly large inventory given the size of their system/service area. Using atypical equipment could result in long system down times, due to the difficult in obtaining replacements.

Also, it was the State of Utah's understanding that they would be full participating members of the Transmission Coordinating Committee, yet the Air Force is not copying us on their correspondence with the utilities. Ken and I do not view this as an oversight, but feel we are being intentionally excluded. Therefore, the State of Utah is effectively excluded from participating as full members of the Committee.

* * * * * * * * *

Ken and I had this meeting because we felt that although progress has been made, there are still serious problems with the Transmission Coordinating Committee as currently operating. These problems have been enumerated above. The most serious of these (in our opinion) is that the utilities are legitimately requesting data (on annual load requirements by certificated area including service voltages) that the Air Force has consistently not provided for in the past several months. The Air Force has recently provided incomplete summary data that are based on questionable assumptions and no documentation. Again and again the utilities have pointed out that they need the load data and yet the Air Force consistently ignores the requests. Obviously, at some point in the future the Air Force will have the data. However, the Air Force does not seem to be aware that they are running the risk of not giving the utilities enough lead time to provide the necessary generating capacity and transmission system in the early years of the MX weapon system construction and operation. The utilities have committed to provide what the Air Force needs. The Air Force needs to specify what they will require, by location and year. Until this occurs, future Transmission Coordinating Committee meetings will be ineffective.

GROUND RULES AND ASSUMPTIONS

1 o DESIGN TRANSMISSION FOR BACKFILL (6900 SHELTERS). UTILIZATION BASED ON 4600 SHELTERS.

2 o NO ADDITIONAL IN-MIGRATION FOR BACKFILL.

3 o ALL OPERATIONAL LOADS ASSUMED TO BE MINIMUM P.F. OF 0.8.

4 o SHELTER LOAD BASED ON CURRENT ESTIMATES PLUS ALLOWANCES FOR PLU AND OTHER LOAD GROWTH.

5 o TACTICAL LOAD DIVERSITY ASSUMED TO BE 1.25.

6 o NONTACTICAL LOAD DIVERSITY ASSUMED TO BE 1.5.

7 o COMMUNITY POWER SYSTEMS IN SW UTAH (ST. GEORGE, CEDAR CITY ETC.) COMBINED WITH UTAH POWER & LIGHT.

8 o OB/DAA ASSUMED TO BE SERVED BY NEVADA POWER COMPANY.

9 o LOADS FOR NONTACTICAL ARE BASED ON 2 KW PER CAPITA AND IS ASSUMED TO BE DIVERSIFIED NUMBER.

10 o BASE SIZE PER SAC INPUT OF 11-14-80.

11 o DAA/OB/OBTS LOADS FROM MMC EPS 5-13-81.

12 o EIGHTY PERCENT MILITARY OPERATIONS (PERSONNEL & DEPENDENTS) HOUSED ON BASE.

13 o BASE LOADS INCLUDE ELECTRIC COOLING. HEATING ASSUMED TO BE FUEL OIL/NATURAL GAS.

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Utah MX Energy Working Group

FROM: Utah MX Coordination Office

DATE: June 10, 1981

SUBJECT: Transmission Coordinating Committee Meeting

On May 28, 1981, the second Transmission Coordinating Committee meeting was held in the Riviera Hotel in Las Vegas, Nevada. A copy of the agenda and handouts are attached. An attendance list was taken by the Air Force, but I did not obtain a copy of it. Representatives of the Utah/Nevada utilities, the Air Force, the Corps of Engineers (COE), the Bureau of Land Management (BLM) and the State of Utah were present. The discussion is summarized below.

Lt. Col. Joe Ornowski opened the meeting with introductions. He then talked about the Air Force selection of a consultant (EDAW, Inc.) to do base comprehensive planning, and the generic studies they are conducting at four candidate main operating base (MOB) sites: Coyote Springs, Nevada; Beryl and Milford, Utah; and Clovis, New Mexico. He also briefly discussed the latest rumors in MX basing. The Secretary of Defense has stopped the award of all new contracts and the amendment/modification of existing contracts until presidential decisions on the basing mode and deployment area(s) are made. This will be at least a 60-day holding period.

Marlo Rudningen began with a discussion of agenda item (2) and handout 1. A question was raised regarding backfill and the Air Force indicated that the estimated electrical loads incorporate backfill (i.e., 4600 shelters plus 2300 backfill shelters).

Another question was raised about the power loads of Utah communities; the loads are combined with the UP&L loads. The electrical load estimates do not reflect the EDAW work on the base comprehensive plan, although the Flack and Kurtz work, for Martin-Marietta, is incorporated.

The inclusion of 2300 backfill shelters for 1992 design does not include additional operations and maintenance load (O & M) requirements. The AFRCE said the O & M load requirements are negligible.

The Task Force was the basis of the summary manpower estimates shown. These are people directly connected with the system. The loads are for a Coyote MOB and

and Milford secondary 08 (i.e., the preferred scenario from the MX DEIS). The peak loads have been dampened.

The figures do not include cement batch plants. There will be six plants, and each will be located at three different sites (for a total of 18 batch plant sites).

The Milford 08 load is estimated to be 21 MW. The indirect loads have not been included because the latest Task Force manpower estimates were for direct construction, Corps of Engineers and life support system workers only. Henningson, Durham and Richardson (HDR) is utilizing the Task Force estimates of direct employment to calculate indirect employment estimates. These figures should be available at the end of June.

The 2 kW per capita use figure was questioned (as it was at the previous Committee meeting). The validation needs to be unequivocal. The Air Force said that the figure is dependent on the life support system ultimately chosen.

The loads of the two uncertificated areas are combined.

The utilities reiterated that at the previous meeting they had requested that stability studies be included in the Corps of Engineers' long lead electrical study scope of work (see handout 2); these studies are obviously dependent on the system being proposed. The conditions that ought to be studied include the base case, and system faults and their location. The COE said they are at the end of their negotiations with the consultant (Gilbert Commonwealth); as mentioned earlier, they (like the Air Force) are in a holding pattern with regard to the award of contracts.

John Arlidge (the utilities representative) then raised several issues about the May 4, 1981 letter (see handout 3). The utilities general comments are:

1. What are the annual loads by valley/cluster?
2. Where are the loads?
3. What are the voltages and their location?
4. How does the Air Force want to be served?

The utilities were asked to provide the Air Force with various information. In order to fully comply with the request, the utilities must obtain the loads by area, the voltages to be served and their locations. The utilities will do parallel studies with the COE and their consultant. Further, utilities have allied themselves (letter of April 29, 1981) and have agreed on the title: MX Bi-State Power Coordinating Council.

Specific comments are as follows:

1. Utilities has 7.2 kV lines which do not include proposed transmission lines.
2. There are three in the area: the Intermountain Power Project, Allen-Warner Valley, and the Anaconda Transmission Line in northwestern Nevada, as well as various environmental assessments which should be obtained from the Bureau of Land Management (BLM).
3. This is dependent on the contract negotiated at that point in time. The commitment to the Air Force load requirements was reiterated. The Air Force's problem will be in getting the route approved, and not getting the cooperation of the utilities. The general utility practice is tenancy

in-common or single ownership with entitlements. Again, the utilities must know what the Air Force needs and where (i.e., a physical map of the load requirements by site and the voltage the load is to be serviced at).

4. This varies by utility and is subject to geographic terrain. It is dependent on the general geography of the area. The utilities can give the Air Force general system standards. Utilities will make the design standards available, where they exist. The public service/utilities commissions require submission of all feasible designs, as well as the most cost-effective, and the recommended design.

At this point, it became apparent that the utilities and the Air Force continue to have a basic philosophical difference. Outsider designs are not condoned or tolerated by the utilities.

5. PURPA findings will be made available where they exist.

6. The utilities need site-specific information in order to answer this point. However, all existing substations are fully dedicated. All facilities already there are being used. Microwave communication will be difficult due to saturation; the Air Force will have to supply frequencies to the utilities (i.e., so that the Air Force and the utilities can communicate with each other). Obviously, inter-utilities communications is the responsibility of the utilities.

7. The utilities indicated that the pull-up-and-down costs for temporary facilities could be steep. A cost/benefit analysis for temporary utilities transmission system versus using diesel generators should be conducted. A question was raised by the utilities about whether the land withdrawal application would include lands for utility interconnections outside the system. If not, it was suggested that this should be included in the land withdrawal application if the Air Force wants the power in a timely manner.

8. Nevada Power Company

9. Two to ten years. The adequacy of the MX DEIS alternatives was questioned and dismissed by the Air Force. The utilities said they would not construct for excess capacity or backfill, but would design for it if the Air Force foots the bill.

10. Utilities will provide the available data to the Air Force.

The Air Force and utilities share a problem of lack of decisions and direction. Further, the Air Force has a problem with funding at the present time. The Air Force wants an independent contractor to verify that the utilities are correct. It was recognized that a joint effort between the Air Force and the utilities with early planning and cooperation is necessary, particularly to devise the most reliable, cost-effective system that the utilities can operate. The Air Force is committed to providing as much data as possible to the utilities for preliminary planning. Funding is a problem, although it will be explored for the future. The Air Force is concerned about parallel planning efforts that are not compatible and must be resolved. The utilities' approach must be examined.

The utilities want loads (timing and location) and voltages. The AFRCE said that the voltage from distribution centers to the clusters is 24.9 kV, and is a single phase 14.4 kV at each shelter, which is an odd voltage which could cause equipment problems. The question was raised about the voltages needed at the operating bases.

The Air Force said the construction management plan deals only with the deployment of the weapon system. The FY 83 Utah construction is: Pine, Wah Wah, Hamlin, Whirlwind and Sevier Desert Valleys; FY 84 Utah construction is: Snake Valley; and FY 85 Utah construction is: Fish Springs Flat, Dugway and Tule Valleys. The Air Force said they would provide copies of the construction sequence maps.

A question was raised about the construction power estimates. The Air Force said the numbers are subject to change because of the many variable parameters.

The Air Force asked about the availability and feasibility of the utilities supplying temporary power for construction and where this would be located. The three affected utilities have looked at Coyote Springs; they must discuss and more accurately define the possibilities. The existing power line from Las Vegas to Pioche has a capacity of 20 MW and a current use of about 13 MW. The operating base site is in an uncertificated area. It would take about two years to supply the power, assuming it is totally from Reid Gardner and transmitted over 138 kV or 345 kV lines. Nevada Power Company said it thinks it can service the FY 82-83 loads (this is probably, not surely). Nevada Power Company can supply the total operating base power loads depending on when this is needed.

UP&L said it thinks it can supply the FY 84 power load at Milford, but is not sure if the FY 85 power will be available. Also, their service area probably only encompasses the north Milford site within the vicinity zone. Also, it was pointed out that the MOB actually refers to the base proper, an airfield and attendant facilities, a designated assembly area, an operational base test site and a storage depot.

Dixie-Escalante was not represented to answer the question for the remaining Milford and the Beryl sites.

The Air Force wants the utilities to provide verification of the availability/feasibility of supplying temporary power to the MOB, and the dollar cost to the Air Force for doing so.

The utilities said the Air Force would pay both the cost of constructing facilities and the incremental cost of providing power, since the published rate schedules are not applicable. This is due to the unique nature of the MX "business" and the extensive line extensions.

The MX Bi-State Coordinating Council has a Memorandum of Agreement (not a contract forming a single entity) which cites objectives and appoints the Nevada Power Company as utility/Air Force liaison. Participants (or members) are those utilities directly affected by MX deployment; they have voting rights and sign-off privileges. Indirectly-affected utilities can initial agreements only as indirectly-impacted parties.

PROPOSED AGENDA

LONG LEAD ELECTRICAL STUDY SUMMARY

MX ELECTRICAL LOADS

(1) AF REQUIREMENTS AND CRITERIA

(2) UTILITY COMPANIES REQUIREMENTS

(3) SCHEDULING

Atch 1

GROUND RULES AND ASSUMPTIONS

- DESIGN TRANSMISSION FOR BACKFILL (6900 SHELTERS). UTILIZATION BASED ON 4600 SHELTERS.
- NO ADDITIONAL IN-MIGRATION FOR BACKFILL.
- ALL OPERATIONAL LOADS ASSUMED TO BE MINIMUM P.F. OF 0.8.
- SHELTER LOAD BASED ON CURRENT ESTIMATES PLUS ALLOWANCES FOR PLU AND OTHER LOAD GROWTH.
- TACTICAL LOAD DIVERSITY ASSUMED TO BE 1.25.
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- LOADS FOR NONTACTICAL ARE BASED ON 2 KW PER CAPITA AND IS ASSUMED TO BE DIVERSIFIED NUMBER.
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- DAA/OB/OBTS LOADS FROM MMC EPS 5-13-81.
- EIGHTY PERCENT MILITARY OPERATIONS (PERSONNEL & DEPENDENTS) HOUSED ON BASE.
- BASE LOADS INCLUDE ELECTRIC COOLING. HEATING ASSUMED TO BE FUEL OIL/NATURAL GAS.

MX TACTICAL & NONTACTICAL TOTAL ELECTRICAL LOADS

MX POWER SYSTEM	YEAR-FUNCTION	TOTAL LOADS (MW)	
		PEAK DEMAND	TOTAL US MWH
TACTICAL LOAD SUMMARY	1992 DESIGN	173.7	N/A
TACTICAL LOAD SUMMARY	1992 UTILIZATION	138.2	1,157,844
TATICAL LOAD SUMMARY	1987 UTILIZATION	79.4	642,056

P-1

(1) MAXIMUM UTILIZATION TO BE MET THRU COMBINATION OF COMMERCIAL SOURCES AND ON-SITE GENERATION.

TACTICAL LOAD - 1992 DESIGN

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUA
SHELTERS	6900	22	27	N/A	151.8	186.3	N/
CMF (UNMANNED)	194	7	220		1.4	42	
(MANNED)	6	140	220		0.8	2	
ASC	4	800	1,400		3.2	5.6	
DAA	1	10.820	17.870		10.8	17.9	
OBTS	1	1,796	3.321		1.8	3.3	
OB # 1	1	32,200	40,580		32.2	40.6	
OB # 2	1	21.365	30,521		21.4	30.5	
TOTALS					178.7 (1)	326.2	

(1) PEAK LOADS NOT ADDITIVE DUE TO DIVERSITY. ASSUMED TO BE 1.25.

TACTICAL LOAD - 1992 UTILIZATION

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUAL MWH
SHELTERS	4600	22	27	0.8	101.2	124.2	709,210
CMF (UNMANNED)	194	7	220		1.4	42	9.811
(MANNED)	6	140	220		0.8	2	5,606
ASC	4	800	1,400		3.2	5.6	22,426
DAA	1	10.820	17,870	0.33	10.8	17.9	31,220
OBTS	1		3,320	0.25	1.8	3.3	3,942
OB # 1	1	32,200	40,580	0.8	32.2	40.6	225.758
OB # 2	1	21,365	30.521	0.8	21.4	30.5	149.971
TOTALS					138.2 (1)	266.1	1,157,844

(1) PEAK DEMANDS NOT ADDITIVE DUE TO DIVERSITY, ASSUMED TO BE 1.25.

TACTICAL LOAD - 1987 UTILIZATION

MX FACILITIES		LOADS PER FACILITY (KW)			TOTAL-ALL FACILITIES (MW)		
	NO.	PEAK DEMAND	TOTAL CONNECTED	UTILIZATION FACTOR	PEAK DEMAND	TOTAL CONNECTED	ANNUAL US MWH
SHELTERS	2300	22	27	0.8	50.6	62.1	354,605
CMF (UNMANNED)	230	7	220		1.6	50.6	11,213
(MANNED)	4	140	220		0.6	0.9	4,205
ASC	2	800	1,400		1.6	2.8	11,213
DAA	1	10,820	17,870	0.33	10.8	17.9	31,220
OBTS	1	1,796	3,320	0.25	1.8	3.3	3,942
OB # 1	1	32,200	40,580	0.8	32.2	40.6	225.759
TOTALS					79.4 (1)	178.2	642,056

P-14

(1) PEAK DEMANDS NOT ADDITIVE DUE TO DIVERSITY, ASSUMED TO BE 1.25.

Head count
Appropriate portion of MX
Fort-Comm.
Scenario

NEVADA/UTAH

SUMMARY ESTIMATED MANPOWER BY FRANCHISE AREA

26 MAY 1981 Page 1

	82	83	84	85	86	87	88	89	90
NEVADA POWER COMPANY									
OPERATIONS		39	234	2611	5677	7722	7722	7730	77
CONSTR/COE	1392	2936	2762	2618	1565	1065	1052		
A&CO	50	200	500	900	1250	1250	1250	1250	2
TOTALS	1442	3175	3496	6129	8492	10024	8970	8980	79
LINCOLN COUNTY POWER DIST									
OPERATIONS									
CONSTR/COE	304	1259	2809	5351	3675	615	214		
A&CO	10	100	222	1179	2071	985	329		
TOTALS	314	1359	3031	6560	5746	1600	543		
MT WHEELER POWER									
OPERATIONS									
CONSTR/COE	98	408	1155	1960	3727	4537	4286	2880	
A&CO			19	19	608	1092	1330	1916	
TOTALS	98	408	1174	1979	4335	5629	6116	4796	

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	82	83	84	85	86	87	88	89
SIERRA PACIFIC POWER CO								
OPERATIONS								
CONSTR/COE			419	1504	3677	6424	4203	1300
A&CO				18	121	826	1711	1389
TOTALS			419	1522	3798	7250	5914	2689
UTAH POWER & LIGHT								
OPERATIONS				31	246	1946	4497	5600
CONSTR/COE	238	987	2364	6388	5483	4031	1876	498
A&CO			60	160	1183	1438	638	450
TOTALS	238	987	2424	6548	6666	7415	7011	6548
UNCERTIFIED AREAS								
CONSTR/COE				96	441	1067	1685	830
A&CO					17	25	444	535
TOTALS				96	458	1092	2129	1365
A&CO & COE - LAS VEGAS	250	500	600	300	200	200	200	200
A&CO & COE - SALT LAKE CITY	250	500	600	300	200	200	200	200

ELECTRICAL LOADS (MW)
POWER DISTRICT SUMMARY

	82	83	84	85	86	87	88	89
NEVADA POWER COMPANY								
OPERATIONS		1.6	8.2	18.2	25.5	29.8	32.7	32.8
CONSTR/COE/A&CO	2.8	6.3	6.5	7.0	5.6	4.6	2.5	2.5
TOTALS	2.8	7.9	14.7	25.2	31.1	34.4	35.2	35.3
LINCOLN COUNTY POWER DIST								
OPERATIONS				5.	15.8	15.8	18.4	18.4
CONSTR/COE/A&CO	.6	2.7	6.1	13.1	11.5	3.2	1.1	
TOTALS	.6	2.7	6.1	18.1	27.3	19.0	19.5	18.4
MT WHEELER POWER								
OPERATIONS					5.1	11.1	14.1	23.0
CONSTR/COE/A&CO	.2	.8	2.4	4.0	8.7	11.3	12.2	9.6
TOTALS	.2	.8	2.4	4.0	13.8	22.4	26.3	32.6
SIERRA PACIFIC POWER								
OPERATIONS					1.4	3.8	12.8	22.8
CONSTR/COE/A&CO			.8	3.0	7.6	14.5	11.8	5.4
TOTALS			.8	3.0	9.0	18.2	24.6	28.2
UTAH POWER & LIGHT								
OPERATIONS				3	12.5	21.8	29.6	35.1
CONSTR/COE/A&CO	.5	2.0	4.8	13.1	13.3	10.9	5.0	1.9
TOTALS	.5	2.0	4.8	16.1	25.8	32.7	34.6	37.0

OPERATIONS - PEAKS + BASE.
CONSTRUCTION - PEAKS ONLY 3 SKW/PERSON
[illegible] LOAD VCT

ELECTRICAL LOADS (MW)
POWER DISTRICT SUMMARY

	82	83	84	85	86	87	88	89
UNCERTIFIED AREAS								
OPERATIONS							4.6	6.1
CONSTR/COE/A&CO				.2	.9	2.2	4.3	2.7
TOTALS				.2	.9	2.2	8.9	8.8

OPERATIONS (MW) (POWER DIST) 26 MAY 1981

	82	83	84	85	86	87	88	89	90
SIERRA PACIFIC POWER					1.4	3.8	12.8	22.8	2
MT WHEELER POWER					5.1	11.1	14.1	23.0	2
LINCOLN CO POWER DIST				5.0	15.8	15.8	18.4	18.4	1
NEVADA POWER CO		1.6	8.2	18.2	25.5	29.8	32.7	32.8	3
UNCERTIFICATED							4.6	6.1	
UTAH POWER & LIGHT				3.0	12.5	21.8	29.6	35.1	3
TOTALS		1.6	8.2	26.2	60.3	82.3	112.2	138.2	13

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ELECTRIC LOADS (MW) CONST/COE/A&CO 26 MAY 1981

	82	83	84	85	86	87	88	89	90
SIERRA PACIFIC POWER			.8	3.0	7.6	14.5	11.8	5.4	
MT WHEELER POWER	.2	.8	2.4	4.0	8.7	11.3	12.2	9.6	
LINCOLN CO. POWER DIST	.5	2.7	6.1	13.1	11.5	3.2	1.1		
NEVADA POWER CO	2.8	6.3	6.5	7.0	5.6	4.6	2.5	2.5	
UNCERTIFICATED (INCLUDES)				.2	.9	2.2	4.3	2.7	
UTAH POWER & LIGHT	.5	2.0	4.8	13.1	13.3	10.9	5.0	1.9	
TOTALS	4.1	11.8	20.6	40.3	47.6	46.7	36.9	22.1	

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ELECTRIC LOADS (MW) (IN-TOWN) 26 MAY 1981

	82	83	84	85	86	87	88	89	90	91	92
SIERRA PACIFIC POWER							.1	1.8	.8		
MT WHEELER POWER						1.0	.6	.1	.1		
LINCOLN POWER DIST.					.1	.1	.1	1.1	.8	.7	.7
NEVADA POWER CO.			4.8	20.8	33.4	27.6	20.5	5.8	5.8	5.8	5.8
OVERTON POWER DIST #5			.5	2.3	3.7	3.1	2.3	.6	.6	.6	.6
UTAH POWER & LIGHT			1.7	4.6	26.9	36.6	31.6	18.0	13.5	10.1	10.1
ESCALANTE VALLEY ELEC ASSOC.											
			7.0	27.7	64.1	68.4	55.2	27.4	21.6	17.2	17.2

1. Preliminary Summary for Long Lead Electrical.

2. General Background. The overall goal of this project is to provide a plan that constitutes the framework for programming, design and construction execution in support of the total electrical power transmission system for the MX missile program in the southwestern region of the United States. The study shall address various alternatives and schemes, identify long lead electrical equipment for the transmission system and shall include studies and analysis in order to recommend an optimum transmission system for the Air Force's selected basing mode. Early on submittals shall include recommendations for providing power to those facilities in support of Initial Operating Capability (IOC) and a list of related long lead procurement items. This Statement of Work will define the work and services to be performed, contractual options (attachments) and will serve as a basis for arriving at an A-E contract.

3. Work and Services. The work and services to be performed by the A-E shall be for the following items (No on-site field work will be required):

a. Concept Study.

(1) Preliminary Concept Study.

(a) A preliminary concept study shall be prepared during Phase A in sufficient detail to define the electrical transmission system for up to 3 basing alternatives on options exercised by the Government as defined in paragraph 3b. Three transmission schemes shall be evaluated and ranked in recommended order of preference. The study effort shall be based on tasks 3a(2) A thru K to the extent necessary to support realistic comparisons. The submittal shall include but not be limited to narrative descriptions, drawings, sketches, calculations, and cost estimates as described in paragraph 4 necessary to support a decision as to the preferred scheme. The cost estimates for selection shall include the annual cost of maintenance converted to present worth, capitalized, and combined with the first cost for each of the 3 schemes to determine the most economical alternatives. The A-E shall consider the following 3 schemes:

i. A scheme that meets only the minimum MX power requirements IAW. Air Force Criteria, and local, State and Federal codes.

ii. A scheme that considers joint venture with local utility companies and IAW Air Force criteria and minimum standard utility company requirements.

iii. A scheme considering separate power lines form local utility systems to some facilities and power supplied to the other facilities by joint venture lines and meeting minimum Air Force criteria.

Each scheme shall identify means of providing permanent power, and temporary power if required, to those facilities in support of Initial Operating Capability (IOC). Provide recommended routings, voltage levels, and type of construction (OH vs U.G.).

(b) Provide a preliminary list of long lead procurement items (IOC) as required for the proposed first construction phase. The list shall be of such detail as to permit the initiation of contract negotiations to develop procurement specifications. Long lead items are considered to have a procurement period of 12 months or more.

(c) A budget type construction cost estimate for IOC power, shall be provided for each of the three schemes in paragraph 3a(1) with a breakdown of long lead items.

(d) A-E to coordinate with temporary power study developed under the DAA Roads & Utilities Contract.

(e) Power loads, locations and construction time lines will be furnished the A-E.

(2) The final concept study shall be based on the selected scheme for up to three (3) basing alternatives and shall address the optimal transmission system and related corridors, recommended construction phasing, list of long lead procurement items and estimated construction costs, and shall consist of narrative descriptions, calculations, drawings, sketches and schematics. The study effort shall include, but not be limited to, the following task:

A. Optimal Transmission System

i. Provide transmission lines and corridors on topographic maps showing MX loads. Maps of loads to be provided by the COE. Location of corridors shall be based on a literature search.

ii. Provide locations of substations, switchyards, and other load points within the MX System and at utility interfaces.

iii. Indicate width of corridors.

iv. Mountainous or steep hilly areas shall be designated as such and separately defined.

v. The DTN road corridors shall be considered for colocation of the transmission system corridors.

B. Environmental Assessment. Provide an environmental assessment based on literature search and without field work.

i. Consider environmental constraints in site selections.

ii. Utilize to the maximum extent applicable sections of the DEIS.

iii. List Federal, State, and local permits required based on the MX Legal Compendium. The COE will provide Legal Compendium.

C. Protective Relaying System

i. Determine the preferred coordination scheme.

ii. Determine the optimum type of relaying system.

D. Supervisory Control and Data Acquisition System

i. Develop a list of functions to be supervised and monitored or controlled.

ii. Indicate the operational requirements of remote terminal units.

iii. Indicate the desired type and rate of communications between remote terminals and central control unit.

iv. Discuss the operational requirements of complete systems relative to security, control, and maintenance.

v. Determine the feasibility of expanding existing utility company SCADA systems.

E. Metering and Communication Requirements

i. Determine the optimum metering system for the transmission system based on user and utility company requirements.

ii. Provide recommendations for local communication systems within the power transmission system.

iii. Air Force requirements shall be provided by the Corps of Engineers.

F. Line Transposition Study. Prepare a preliminary line transposition study to determine whether a more detailed study is required. A final study, if required, shall be completed by others and is not part of this scope of work.

G. Load Flow Study

i. Identify power source locations, types, capacities, and quality.

ii. Tabulation of loads at each load point based on average demand, peak demand, and connected loads.

iii. Indicate the load flow on transmission lines during normal conditions.

iv. Indicate the load flow for single line outages, substations, switchyards, and at all other load points.

v. Provide transmission system voltages.

vi. Display all results in tabular form.

H. Availability/Reliability Study

i. Calculate empirical availability/reliability values based on actual utility company outages.

ii. Calculate availability/reliability values based on AFM 88-15.

iii. Determine the effect of the Supervisory control and Data Acquisition System on availability/reliability.

I. Fault Analysis Study

i. Obtain from the utilities the single phase line-to-ground and three phase fault equivalence for the MX/Utilities system interfaces.

ii. Determine the single phase line-to-ground and three phase fault equivalence necessary to determine the equipment fault ratings at substations, switchyards, and other load points.

iii. Provide an integrated MX/Utility power system fault model.

J. Construction Schedule

i. Develop the proposed construction phasing of the recommended MX power transmission system as a function of Air Force need dates, and the COE Construction Management Concept. The Construction Management Concept will be provided by the COE upon completion of Phase A.

ii. Indicate procurement phasing of long lead electrical equipment as a function of construction phasing.

iii. Discuss the estimated construction period for each proposed construction phase based upon the materials and construction methods. Show phasing on a bar chart.

stability studies

K. Long Lead Procurement Items

i. Provide a consolidated list of all equipment with an estimated procurement period of twelve months or more. This list shall establish the sequence of procurement such that a facility is completely furnished with equipment as a function of construction phasing. Facilities are defined as substations, switchyards, etc.

ii. Long lead equipment list shall identify each item as to operational ratings, quantities, lead time and source of information.

(3) Miscellaneous requirements and assumptions to prepare the study are listed in paragraph 4.

b. Basing Alternatives.

(1) 200 missiles in Nevada/Utah with the main base at either Coyote Springs, Nevada or Beryl/Milford, Utah.

(2) 100 missiles in Texas/New Mexico.

(3) Split basing alternatives with 100 missiles each in Nevada/Utah and Texas New Mexico and the main operating bases at Coyote Springs, Nevada and Clovis, New Mexico.

4. Miscellaneous Items

a. Format. All submittals shall consist of a narrative description; supplemented by sketches, schematics, and drawings; calculations; and construction estimates, sectionalized by subject matter into ten (10) volumes as defined in the "Deliverables Schedule".

(1) Standard sheet size shall be 8 1/2" x 11". Foldouts shall be sized as necessary to cover material but not larger than 22" x 22 1/2". Foldout sheets shall be folded so that publication number and page number show. The outside edge of the sheet after folding shall be 8 1/2" from the binding edge of the sheet. Foldouts need not be provided for preliminary and interim submittals.

(2) Reproduction area shall be approximately 6 1/2" x 9" allowing 1 1/2" for binding margin, 1/2" for other side margin and 1" top and bottom.

(3) Pages shall be numbered.

(4) All pages shall be printed head to head.

(5) Pages may be printed both sides except that foldout/foldup pages shall be printed one side and shall be right hand pages.

(6) Each volume shall be sectionalized as follows:

Title Page
Table of Contents
List of Major Illustrations
Introduction
Main Text
Glossary/Appendix

(7) Provide for an Executive Summary.

(8) Copies shall be bound in heavy duty binders.

(9) A complete list of all vomumes shall be referenced in each volume.

(10) The Sacramento District project manager shall be consulted prior to any changes in format.

b. The narrative description shall not only limit itself to the various schemes, studies and other related tasks but shall also address seismic considerations, climatic considerations, listing of established criteria and recommendations for waivers to established Air Force criteria in order to implement the recommended transmission system, a list of agencies contacted (name of individual, address, telephone number).

c. Drawings, sketches and diagrams shall only be provided to supplement the narrative description.

(1) The optimal transmission system and proposed corridors may be shown on multiple drawings, provided the scale is sufficient to allow proper resolution. Maximum use shall be made of the topographic maps developed by the US Geological Survey.

(2) Sketches and diagrams shall be one-line.

d. Calculations shall be limited and be only of such detail to assist in the decision making process for the recommended transmission scheme.

(1) The use of automatic data processing systems are encouraged whenever this will result in cost reduction and/or improved results. Provide input/output listings as an integral part of the study.

(2) Two sets of the computer printout shall be provided to the Sacramento District.

(3) Data card decks or tapes used for final computations shall be retained by the A-E for the life of the design program.

e. The procurement cost estimate shall be a budgettype commensurate with the stage of the study. The estimate shall be based on current prices and the grand totals escalated to the midpoint of procurement for each of the proposed construction phases.

(1) The estimate shall identify equipment for substations, switchyards, and other long lead items.

(2) Provide for a cost summary sheet for each phase of construction and for the total project.

(3) A-E to utilize Sacramento District's Cost Estimating Manual as to format.

(4) Availability equipment, and anticipated market conditions will be considered in developing the estimate.

f. The construction cost estimate shall be a budgettype commensurate with the stage of the study. The estimate shall be based on current prices and the grand totals escalated to the midpoint of construction for each of the proposed construction and procurement phases.

(1) The estimate shall identify substations, switchyards, transmission line support structures, protective relaying system, supervisory control and data acquisition system, metering and communications systems, and other main cost items.

(2) Provide for a cost summary sheet for each phase of construction and for the total project.

(3) A-E to utilize Sacramento District's Cost Estimating Manual as to format.

(4) Availability of labor, materials, local labor rates, construction practice, and anticipated construction market conditions will be considered in developing the estimate.

g. Systems and equipment selection: Provide the annual cost of maintenance converted to present worth, capitalized and combined with the first cost to determine the most economical alternative.

h. No topographic surveys will be required to be performed by the A-E. Maximum use shall be made of existing USGS maps.

i. Review comments made during the concept study shall be completely annotated as to action taken by the A-E and returned to the Sacramento District with the submittal. The A-E's transmittal letter shall include a list of rebutted comments with a clear statement outlining the A-E's position.

j. Two progress review meetings will be held in the A-E's office. The A-E will discuss the status of the study and the results obtained of the various studies. Thirty-five (35) calendar days prior to each meeting, the A-E will distribute for review a summarized package i.a.w. the list of deliverables.

5. Deliverables and Period of Services. The items of work shall be completed and ready for submittal as shown in Attachment 2. Refer to Section 3a(2) of this scope for a minimum description of each item of work.

6. Period of Service

a. Total study: 270 calendar days after notice to proceed. This includes review times by the Government of 35 calendar days before each progress review meeting, but does not include the final review period of the period for correction of finale.

b. Preliminary Concept Study Incl IOC Power: 120 calendar days after notice to proceed.

c. Preliminary list of long lead procurement item (IOC): 90 calendar days after notice to proceed.

2 Atch

BASING OPTIONS

Option 1: All Phase A work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M. and 2 sites for split basing alternative.

Option 2: All Phase B work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M. and 2 sites for split basing alternative.

Option 3: All Phase C work concurrently for all 3 Basing Alternatives with MOB's at 3 sites for N/U, 1 site for T/N.M. and 2 sites for split basing alternative.

Option 4: Phase A work for Nevada/Utah Basing Alternative with MOB at 1 site.

Option 5: Phase B work for Nevada/Utah Basing Alternative with MOB at 1 site.

Option 6: Phase C work for Nevada Utah Basing Alternative with MOB at 1 site.

Option 7: Phase A work for Texas/New Mexico Basing Alternative.

Option 8: Phase B work for Texas/New Mexico Basing Alternative.

Option 9: Phase C work for Texas/New Mexico Basing Alternative.

Option 10: Phase A work for split Basing Alternative.

Option 11: Phase B work for split Basing Alternative.

Option 12: Phase C work for split Basing Alternative.

Attachment # 1

.IVERABLES	Volume Number	(90 Cal Days)	Phase A (120 Cal Days)	Phase B (80 Cal Da;	Phase C (70 Cal Days)	Corrected ... Study (20 Cal Day
eliminary List of Long Lead Items		F/40				
eliminary Concept Study Including IOC Power Plans			F/40			
ncept Study					F/40	CR/40
Executive Summary	I					
Optimal Transmission System	II		P/40	I/40	F/40	CF/40
Environmental Assessment	III		P/40	I/40	F/40	CF/40
Protective Relaying					F40	CF/40
Supervisory Control & Data Acquisition System	IV					
Metering & Communications Requirements						
Line Transposition Study					F/40	CF/40
Land Flow Study	V				F/40	CF/40
Availability/Reliability Study	VI				F/40	CF/40
Fault Analysis Study	VII			I/40	F/40	CF/40
Construction Schedule	VIII			I/40	F/40	CF/40
Long Lead Electrical Equipment	IX		P/40	I/20	F/20	CF/20
Cost Estimates a)Construction b)Long Lead Items	X		P/20 P/20	I/20	F/20	CF/20

:Y

- Preliminary Submittal
- Interim Submittal
- Final Submittal
- Corrected Final Submittal
- Number of copies

Attachment #2

DEPARTMENT OF THE AIR FORCE
REGIONAL CIVIL ENGINEER - MX (AFRCE)
NORTON AIR FORCE BASE, CA 92409

MAY 7 [illegible]

REPLY TO ATTN OF: DEES

4 May 1981

SUBJECT: Technical Data Requirements

TO: Nevada Power Company
ATTN: Mr. John Arlidge
Manager Special Projects
P. O. Box 230
Las Vegas NV 89151

1. We are transmitting through you to the Nevada/Utah Electric Power Utility Group, a "Want" List of technical data needed by the COE for their A-E who is developing the conceptual study of the M-X Project, Electrical Transmission System.

2. Request above data be provided to AFRCE-MX/DEES by 13 May 1981.

3. If it will be necessary to incur costs in obtaining and supplying the technical data we request, please so advise and await our authorization.

ROBERT L. WONG
Deputy Director, Engineering Division

1 Atch
"Want" List

Cy to: HQ USAF/RD-M (MXLO/Maj Huff)
HQ USAF/RD-M (MXLO/Maj McMains)

MX MISSILE PROJECT

"Want" List of Technical Data Needed
From Electric Utilities

1. Geographical and single line diagrams of electric facilities within the area, down to and including 2.4 kV. This should include both present and future facilities within the following counties:

STATE/COUNTY	ALTERNATIVE		
	PA, 1-6	7	8
Nevada			
Esmeralda	138	—	—
Eureka	323	—	—
Lander	84	—	—
Lincoln	953	—	920
Nye	1,324	—	629
White Pine	437	—	36
Subtotal	3,259	—	1,585
Utah			
Beaver	189	—	188
Juab	314	—	17
Millard	754	—	510
Tooele	84	—	—
Subtotal	1,341	—	715
Region Total	4,600	—	2,300

2. Any public documents involving environmental considerations for transmission or distribution facilities on recently installed or proposed facilities.

3. Existing philosophy on allocation of losses and operation and maintenance in the case of joint use of facilities by two or more utilities.

4. Equipment or transmission line requirements as defined by utility construction standards or customer connection standards.

5. Company safety practices on customer connections involving customer connected generation.

6. At the potential source connection points:

   a. Equivalent impedances, both positive and zero sequence impedances.

   b. Voltage regulation and any limitations on "in" or "out" var flow.

   c. Restrictions such as geographical on the addition of connections to present source points (substations).

   d. Billing metering and telemetering facilities including types, location, need for backup and preferred methods of totalization.

e. Types of supervisory control and potential for adding points along with associated communications.

f. Types of protective relaying and associated communications.

g. Need for voice communications between the utility and MX facilities.

7. Identify specific requirements that utilities may have for design and construction of temporary distribution and transmission facilities for Coyote Springs, NV; Beryl, UT; and Milford, UT. State requirements for upgrading existing lines to accommodate MOB/DAA/OBTS loads and DDA loads in Dry Lake Valley, Wah Wah Valley, Pine Valley, Delmar Valley, Pahroc Valley, Snake Valley, Tule Valley, and Whirlwind Valley.

8. Submit names, addresses, and phone numbers for the following utility company personnel:

a. Coordinator/Project Engineer.

b. Technical Representatives.

9. Indicate in general the steps necessary to proceed to design and construction of future systems, including the feasibility of obtaining necessary approvals. Show realistic time-frames for accomplishing the above (EIS, utility coordination, etc.).

10. Provide a summary of critical transmission and distribution systems design and construction standards and requirements, including the following:

a. Environmental constraints on construction.

b. Design standards for pole foundations, pole types, substation/switchyards, etc.

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Persons

FROM: Utah MX Coordination Office

DATE: June 25, 1981

SUBJECT: MX Siting Review Board Meeting

One May 22, 1981, the first meeting of the MX Siting Review Board was held in Room 305 of the Utah State Capitol. The agenda and attendance list are attached. The discussion is summarized below.

Colonel Bill Sims (AFRCE-MX/DEV) began the meeting by introducitn the Air Force representatives, followed by the introduction of all others present. He discussed the responsibilities of the Air Force Regional Civil Engineer's Office for MX (AFRCE-MX) and the Ballistic Missile Office (BMO). AFRCE-MX is responsible for the siting and functioning of the MX weapon system.

Brig. Gen. Charles Lamb is the Air Force Regional Civil Engineer for MX. Within the AFRCE-MX are several division, including the Environmental Planning Division which is headed by Colonel Sims (AFRCE-MX/DEV). The deputy of this division is Lt. Colonel Bill Verkest. Within the Environmental Planning Division are several branches, including the Comprehensive Planning Branch which is headed by John Solid, (AFRCE-MX/DEVC). Siting activities are conducted in this branch. Major Mike Elliott coordinates MX weapon siting within the designated deployment area, and Captain Wayne Snowbarger coordinates siting for the main operating base.

The siting coordination process was then reviewed. The purpose of the MX Siting Review Board is to formalize the communications network in order to get interactive feedback on the MX weapon system siting proposals in a methodical way. The basing mode decision is expected in June of 1981, and Colonel Sims briefly discussed the land withdrawal process.

At present, 227 cluster (5291 shelters) have been preliminarily sited in all of the deployment area valleys in Utah. This gives the Air Force a 10 percent or 27 clusters maneuvering ability. Ultimately, the Air Force must choose 200 of the 227 clusters revised second-iteration site layouts for the Initial Operating Capability (IOC) valleys by June 19, 1981 (subsequently revised to June 30,1981).

The Air Force will review and react to the comments on the layouts. Further, the siting methodology is also open to review and comment. The IOC valleys layouts should be discussed in detail. The outcome of the site review process will be documented by the Siting Review Board's meeting minutes; decisions will be on a concensus basis indicating that the siting process is acceptable and/or amendments to the process will be incorporated. The Tier II process involves incremental approval of site layouts.

A clarification of the MX Siting Review Board decision-making process was requested; i.e., is the process act/react or interactive, what is the purpose of the board and the reasons for its creation. The Air Force prefers that the board have an act/react review and recommendation process having appropriate supporting documentation. It will not be a decision-making body. Of course, this process will be influenced by the data and constraint evaluations from the siting comments; the Air Force expects there to be environmental resource trade-off and mitigation proposals. Divergent viewpoints will be conveyed by the Air Force representatives to their superiors. Disagreements and resistance must be brought to the attention of the decision makers.

A concern was raised that the Air Force develop a process that facilitates the interchange of comments among board members. Successful dialogue would necessitate exchange of opinions/comments. The Air Force agreed and said that their siting comments would be open to review by all. It was suggested that the board members send copies of their siting comments to one another. The Air Force policy is that comments to be coordinated at the MX Site Review Board meeting, not prior; the Air Force wants an open, nonmanipulative review process.

In summary, the purpose of the MX Site Review Board is one of information exchange, coordination of siting layouts, review of siting conflicts and identification of appropriate mitigation measures.

The operation of the board was then reviewed. The Air Force will internally review the preliminary MX weapon system site layouts. The board members will be the focal points for distribution of the preliminary layouts within their own organizations and for the review of the layouts, which will be forwarded to the Air Force before board meetings. The comments will be discussed at the board meetings, and documentation of approvals or disagreements will be through the meeting minutes or letters/memorandums.

A clarification of the decision-making hierarchy was requested. The Air Force indicated that decisions following the Tier I decisions are dependent on the enabling legislation; decision-making authority could be delegated incrementally (possibly to the Secretaries of Defense and Interior), or Congress could retain the prerogative to make decisions at the legislative level. AFRCE-MX will prepare the land withdrawal proposals, which will then be sent to the Pentagon, the Corps of Engineers real-estate section and the BLM. Public hearings will be held on individual applications. The specific decisions would be made in accordance with the land withdrawal legislation.

The Air Force was asked to clarify under what conditions the Air Force decision makers changing the board's recommended approvals. The Air Force suggested that, for example, decisions could be made to not site the weapon system in all

or part of controversial valleys, or to site the weapon system outside of the suitability zones (which would require a supplemental Tier I environmental impact statement).

The BLM asked who had participated in the development of the siting criteria. The Air Force said that the BLM had been involved in all major aspects of siting. They had provided the Air Force as much feedback and assistance as possible, given the BLM's manpower constraints.

The operation of the board was then discussed in greater detail. ERTEC Western prepares the site proposals. The Air Force cursorily review these for adequacy. The focal points for recommendations would be the board members.

A question was raised about the participation of federal agencies (in addition to the BLM and US Fish and Wildlife Service) on the board; the Air Force asked for clarification. It was suggested that the USDA and USDOT, as well as other federal agencies, could conceivably be interested in reviewing the site layouts, but there is no opportunity for this to occur as the board is currently structured. Coloned Sims said that the Air Force would contact the Federal Regional Council in Denver (Region VIII) and solicit the participation of other interested federal agencies. The Corps of Engineers suggested that participation on the board be restricted to land managers. The Forest Service indicated that to date, their agency had been neglected by the Air Force. Colonel Sims agreed that there were problems and said that the Air Force is currently attempting to resolve them. The Air Force said that they would prefer written comments on the site layouts; maps are acceptable supporting documentation.

The siting process was then reviewed. The system was overviewed, showing the Designated Assembly Area (DAA) connected to the Designated Deployment Area (DDA) via the Designated Transportation Network (DTN), which also connects the clusters, which are connected to the shelters via unpaved clusters roads. The conceptual regional layout proposal was then discussed. The distance from the DAA to the nearest cluster is about 30 miles, from the DAA to the nearest Area Support Center (ASC) is about 100 miles, from the DAA to the farthest cluster is about 330 miles, and from ASC to ASC is about 110 miles. The average speed of the transport vehicle is 25 miles an hour. The DTN will be open to public use. In fact, only the fenced physical facilities (shelters, cluster maintenance facilities, area support centers, etc.) will not be accessable to the public. The Air Force reiterated their policy of unimpared public access during construction and operations.

THe MX land withdrawal concept was then reviewed. The legislative proposal will contain survey legal descriptions for the sites in the IOC valleys, as well as a Tier II Environmental Assessment. Protracted legal descriptions will be provided for the remaining deployment area sites. Congressional approval will result in segregation of all of the land parcels needed to meet the MX requirements. The surveyed sites in the IOC valleys would be immediately released to the Air Force; the Department of Interior would be empowered to release the remaining IOC sites on an incremental basis, according to procedures approved by Congress.

The land withdrawal for the IOC was then discussed in greater detail. The IOC land withdrawal proposal will include: the main operating base and facilities,

the designated assembly area, the operational base test site, ten missile clusters (230 shelters), the designated transprotation network and the cluster roads. The Tier IIA environmental assessment for the main operating base site will be written by HDR; EDAW Inc. is the Air Force consultant doing the Pase Comprehensive Plan for the main operating base. The Corp of Engineers will manage the construction activities; they are the Air Force's construction agent.

The Air Force said that the siting layouts will vary according to the siting criteria applied. The Air Force wants to develop a generic siting process that will work regardless of the criteria used. The Air Force was asked whether changes in the siting criteria would affect the suitable/siteable area boundaries. The Air Force said that the criteria do affect the siting boundaries.

The representative of the Southern Paiutes said that the tribe was having difficulty dealing with the multiple-track environmental tiering process. Colonel Sims acknowleged the tribe's concerns but indicated that the layered process was due to the Air Force's tight constraints.

The siting criteria were then discussed in detail. The geotechnical requirements (exclusion criteria) are areas where the depth to bedrock is less than 50 feet, depth to ground water is less than 50 feet, the grade is greater than 10 percent, and the drainage spacing is unacceptable (e.g., there are two 10-foot drainages less than a thousand feet apart). The geotechnical considerations (avoidance criteria) are areas where there is advers terrain, perrenial drainage, playas, ground cracks, sheet flooding or potentially active faults

Environmental and cultural site factors were then discussed. The exclusion criteria include wilderness areas, Indian reservations, forests, parks, monuments grasslands, preserves, wildlife refuges, Indian grazing lands, historic sites and population centers. Also considered are the Corps of Engineers exclusion areas, areas of high potential economic resource areas (mineral), and population stand-off distances (18 nautical miles from communities of more than 25,000 people or three nautical miles from communites of more than 3,000 people).

Avoidance and mitigation factors were then discussed. These include the legal and policy restraints authorized in the MX DEIS, such as threatened and endangered species, historic properties, sacred sites, air quality nonattainment areas, prime farmlands and paleontological resource areas. The stand-ff requirements include roads and highways, power lines, pipelines and inhabited buildings.

Environmental and cultural resources were also considered. These include sensitive sensitive species habitiat and natural areas.

A question was raised about HDR and ERTEC suitability zones conflicts. The Air Force was asked to specify how the data was provided, since the states need to verify the accuracy of the constraint data. The Air Force agreed to furnish environmental resource constraint maps to Utah.

The siting methodology was then discussed. The geotechnically suitable area boundaries are defined; the layouts are the delineated within the geotechnically suitable/environmentally siteable boundaries. To date, resiting has been by bilateral arrangement (i.e., between the Air Force and special interest group or individual). The siting review board will open up this process.

M-X DEPLOYMENT AREA SITING COORDINATION MEETING #1

PROPOSED AGENDA

1. INTRODUCTION - USAF
2. INTRODUCTION OF ATTENDEES
3. SITING COORDINATION GENERAL REVIEW AND DISCUSSION - ALL
   - A. PURPOSE
   - B. MODE OF OPERATION
   - C. DECISION AUTHORITY
   - D. OTHER
4. OVERVIEW OF THE SITING PROCESS
   - A. M-X LAND WITHDRAWAL CONCEPT
   - B. IOC VALLEYS - FOLLOW-ON VALLEYS
   - C. SITING CRITERIA
   - D. SITING METHODOLOGY
   - E. MITIGATION ISSUES
5. OVERVIEW OF SITING LAYOUT DRAWINGS
   - A. REGIONAL LAYOUT
   - B. IOC VALLEYS - DRY LAKE (NEVADA ONLY) PINE AND WAH WAH (UTAH ONLY)
   - C. FOLLOW-ON VALLEYS - CAVE, DELAMAR, PAHROC, MULESHOE (NEVADA ONLY)
   - D. DESIGNATED TRANSPORTATION NETWORK (DTN)
6. GENERAL DISCUSSION - ISSUES FROM THE FLOOR
7. DISTRIBUTION OF ADDITIONAL SITING MATERIALS
8. ADJOURNMENT

Siting Coordination Letter #1

Attachment 2

22 MAY 81 SITING COORDINATION MTG

NAME	ORGANIZATION	TELEPHONE
COL WH SIMS	AFRCE MX/DEV	714 382 4891
LTC WM VERKEST	" " "	" " "
JOHN K SOLLID	" " DEVC	" " 6081
MAJ M.W. ELLIOT	" " "	" " "
Robin K St. Clair	TRW	714 382-2461
James L. Jack	AFRCE-MX DEEC	" " -5615
Debby Hancock	Entec Western	213 595-6611
Morgan Wheeler	Corps of Engrs, Real Estate	916-440-2563
Walter Yep	COE MX Program Agency	714-382-7775
H.R. Stein	MX polics Board	(801) 586-5172
Kenneth C Olson	Utah State MX Coordination Office	(801) 364-9647
Arlen Gorsuch	BLM, Cedar City	(801) 586-2458
Harold L. Sorenson	E.S. Oodson Jr	801 586-8263

Dave Davis BLM UTAH State Off 534564
Roy Edmonds BLM Richfield 896 8221
Carl J. Thurgood BLM Richfield 896 8221
Jim Messerli U.S. Fish + Wildlife 208/334-1490
Robert Benton " (801) 524-4430
Ron Joseph " (801) 524-5637
Richard Jameson Paiute Indian Tribe (801) 586-1111
Pete Wilkins BLM Cedar City (801) 586-2401
Ann Keegan Utah Wildlife Coordination Off (801) 364-9647
JOHN ROACH " " " " " " "
PAM WADE - Deseret News
STAN HOLMES - MX INFORMATION COALITION 581-9027
GILBERT MOORE - THIOKOL CORP. (801) 626-1216
ALAN J. SILVER - TRW (714) 382-3452
EARL HINDLEY BLM-UT. STATE OFFICE (801) 524-5311
Dr Jim Mangi EPTEC Northwest 206 545 73
Stanley Madsen Eptec Western (213) 595 6611

ATTACHMENT 3

Meeting Minutes, Agendas, Attendance Lists and Handouts for

All Functional Area Meetings

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Persons

FROM: Utah MX Coordination Office

DATE: May 13, 1981

SUBJECT: Air Force MX Siting Meeting

On April 23, 1981, an Air Force MX Siting Meeting was held in Room 303 of the State Capitol in Salt Lake City. A copy of the agenda, attendance list and handouts is attached. The discussion is summarized below.

Major Mike Elliott of the Air Force Regional Civil Engineer's Office (AFRCE-MX) began by stating that the Air Force had been working on the siting system for the past nine months and that it was finally beginning to fit together. The Air Force felt that they needed to do a better job of getting input from the state, local and private sector. This is a preliminary meeting, prior to the initiation of a formal siting review board, which would problably be holding its first meeting within a month.

The purpose of the meeting is to do a complete debriefing of what the Air Force and its contractors have done in Pine and Wah Wah Valleys, Utah. Stan Madsen of ERTEC explained that three valleys had been chosen: Dry Lake Valley, Nevada and Pine and Wah Wah Valleys, Utah for the puropse of having ten clusters operational by mid-1986, the Initial operating Capability (IOC) date. The Air Force has opted for ten cluster in Dry Lake Valley and five cluster each in Pine and Wah Wah Valleys.

One of the changes to the baseline system is that it has switched to direct connect, which means that the cluster roads will go directly from one shelter to the next. ERTEC reported that their report on the IOC weapon system layout is in draft form, but it will be submitted to the Air Force very soon. Every time the Designated Transportation Network (DTN) is changed, the shelters have to be modified. Furthermore, there will have to be a 2,500 foot stand-off distance between power lines and any shelter.

The initial weapon system layout for Way Wah Valley had to be changed to regroup cluster because of a DTN rerouting.

Before the surveyors began their work, a geotechnical and monument survey was done. After this process was completed, surveyors prepared legal descriptions and then reports. Since the question remained whether the clusters were acceptable or not, a field review of the surveyed sites ensued. The siting review board will make a final decision on the acceptability of the sites at a later date. If a decision is made to change the site layout(s), then the process would be repeated.

ERTEC stated that approximately 12 acres would be disturbed for each 2,5 acre shelter site. The geotechnical factors affecting the shelter location are depth to rock and water - depths must be more than 50 feet. The BLM will be reviewing wildlife and botanical voucher collections. The Utah State Archeologist has visited the area. Resiting will be recommended so as not to disturb isolated artifacts. A question was asked about the criteria used to determine resiting; ERTEC indicated the resiting criteria was in their report, which will be released to the Air Force next week.

Biological resources were discussed. The BLM has given Air Force contractors biological data for the four operating base sites and the IOC valleys. The lists of protected species are subject to change, so the Air Force is taking into consideration all biological resources that may have protected status when the Air Force is actually in construction. The majority of the biological work conducted to date has focused on plants. No sitings were recommended. It was pointed out that these studies were done only in one season (primarily winter), and it is generally not possible to determine what is happening during the other three seasons. the Air Froce stated that they were considering doing additional biological studies in other different seasons, especially spring. The Utah Division of Wildlife Resources stated that they would help the Air Force and their contractors determine the impacts in the long term; an environmental constraint analysis for Pine and Wah Wah Valleys has already been given to the Air Force.

The Air Force stated that HDR will be doing the Tier II environmental assessments.

A question was asked whether the Air Force would be holding a siting review meeting in southern Utah. The Air Force indicated that they would hold siting review meetings in Nevada and Utah, and they would repeat this meeting on May 15 in Milford, Utah. Further, the Air Force stated that if Nevada and Utah are selected for full basing, the Air Force will use the IOC shelter locations, since most of the sites are good (i.e., geotechnically and environmentally acceptable).

The Air Force was asked about the status of cluster five in Pine Valley and what (if any) alternative solutions were/are being examined. Major Elliott stated that the decision has been made to proceed the land withdrawal requirements. The Air Force is aware that cluster five has a few problmes, but there may not be an easy way to solve them. The easy solution would be to

move the cluster, but that may not be feasible for the Air Force taking everything into consideration.

Several questions were raised about the work that ERTEC is doing on shelter siting and its integration with DTN siting.

The State of Utah stated that the analysis and assessment of environmental resources in the siting process used by the Air Froce needs improvement. It seems that the analysis and assessment of geotechnical and engineering criteria is working well. The Air Force stated that the integration of environmental siting criteria is open for modification.

The Air Force indicated that after IOC valleys have been evaluated and approved using this process, all of the remaining deployment valleys will be handled in the same fashion. There will be an environmental assessment of impacts done on all of the other valleys. The Air Force said they have relied on the BLM to tell them how to do the environmental assessments as well as invited the BLM to tell them how to do the Tier I environmental impact statement for deployment area selection and land withdrawal/acquisition.

The Air Force was asked why the ranchers had not been given any consideration in the siting process. The ranchers had not been contacted by the Air Force as had been promised. Major Elliott stated that the Air Force is aware of the ranching problems and the ranchers' concerns had been taken into consideration in siting the weapon system; clusters were moved because of Animal Unit Months (AUMs). The ranchers have asked the Air Force to map the white sage in Pine Valley and stay away form it in siting if at all possible. The Air Force is going to do the mapping but in all honesty may not be able to avoid the white sage.

Major Elliot stated that the Tier I environmental impact statement was supposed to address the differences in full or split basing the weapon system in Texas/New Mexico and Utah/Nevada. The other "tiered" environmental assessments will address vicinity zone and site-specific impacts. The meaning of "new impacts" was asked and Major Elliott replied that it probably meant different impacts.

It was mentioned that the prairie dog colonies will be avoided by a one-mile stand-off distance for the DTN. Some of the possible solutions to handling both the MX and wildlife are 1) to declare MX areas temporary wildlife areas, 2) to control firearms as well as other alternatives. Mitigation means a reduction in impacts, not necessarily an elimination of impacts.

AIR FORCE SITING MEETING

Room 303, State Capitol, Salt Lake City

1:00 - 5:00 p.m.

April 23, 1981

A G E N D A

I. Air Force Presentation of Pine and Wah Wah Valleys Environmental Assessments and Integration of Utah Environmental Data on These Valleys - Air Force

II. Discussion of Pine and Wah Wah Valleys Siting Problems - Open

III. Presentation of Alternative DTN Routings for Pine and Wah Wah Valleys, Transmittal of Maps and Solicitation of Input - Air Force

IV. Presentation of ASC Siting Near Delta, Transmittal of Maps and Solicitation of Input - Air Force

V. General Discussion of Beryl and Milford OB Siting

DTN = Designated Transportation Network

ASC = Area Support Center

OB = Operating Base

Please call 364-9647 to confirm your attendance. Please designate an alternative if you cannot attend.

Attendance List
MX Siting Meeting
April 23, 1981

Name	Agency	Phone
John Roach	Utah MX Coord. Office	364-9647
Ken Creer	Ut. Dept of Ag	533-5421
Wanless Southwick	Utah Dept of Health	533-6121
Dale Zabriskie	So Utah State College	534-5541
Dean Peacock	Utah Petroleum Assn.	363-5757
C. Eugene Bigler	Division of Water Resources	533-5401
Jerry Olds	Division of Water Rights	533-6071
Ken Ravoles	Division of Parks & Recreation	533 4492
Steven A. Hudson	TRW/NAFB	(714) 382-3459
Mike McCloy	State Science Advisors Office	533-4973
[illegible]	[illegible]	359-3972
D.T. McMillan	Utah Geol. & Min. Survey	581-6831
Roy P. Fox	Utah Mining Assoc.	364-7077
Darrell H. Nish	Utah Wildlife Resources	533-9333
Rudy Drobnick	Utah Wildlife Resources	533-9333
Lee Davis	Brush Wellman Inc.	462-5441
Ernest J. Eberhard	BLM - State Office	524-581
Earl Hindley	" " "	" "
Joan M. McCullough	Union Pacific R.R. Co.	363-1902
Robert S. Adams	Union Pacific R.R. Co.	363 2236
William J. Tafuri	Getty Oil Co.	487-0671
Terry Covington	Phillips Petroleum	918-661-6791
R.C. Lenzer	Phillips Petroleum	364-2083
Dorin Page	So. Ut. State College	586-4401

Dave Connie	STATE PLANNING	533-4014
Gene Shrzenegger	Utah Dept. of Transp.	533-6514
Howard Lehman	"	533-5453
Sheldon W. McConkie	"	533-5210
Michael T. Moon	MILFORD ASSOC. INC.	268-3138
Jim Logan	Utah MX Coordination Office	364-9647
Wesley Earle	"	"

NAME	AGENCY	PHONE #
ROBERT A. ROWLEY	UTAH DEPT. OF TRANS. DIST. 5	586-4491
Elyse E. Wall (Vice-Chairperson)	Paiute Indian Tribe of Utah	586-1111
Richard Jameson	Coordinator Paiute Tribe of Utah	586-1111
LARRY KENNINGS	EDAW, INC.	415/392-9520
A. L. CLARK	AFRCE MX/DEVN	(714) 382-6402
FRED SNIDER	ERTEC WESTERN	(213) 595-6611
DENNIS FARLEY	UNION PACIFIC R. R.	363-1454
Pete Wilkin	BLM Cedar City Dist.	586-2401
Chris Hartnett	BLM New State Office	784-5602
Louis Krug	HDR	(805) 965-5214
Robert Thomson	HDR, Sciences	(805) 965-5214
James Ryback	Ertec Northwest	(206) 545-7303
Gail Thompson	Ertec Northwest	(206) 545-7303
Stanley Madsen	Ertec Western	(213) 595 6611
Dwayne Lyles	Martin Marietta	303-977-0313
[illegible]	HQ USAF/[illegible]	703 [illegible]
Maurice Elliot	AFRCE-MX/DEV	(714) [illegible]
[illegible]	Martin Marietta	(303) 977-0313
[illegible]	[illegible]	(714) [illegible]

MX SITING MEETING
SALT LAKE CITY
23 APRIL 81

1) INTRODUCTION - (USAF)

2) PINE & WAH WAH - FIELD SURVEYS FOR MX IOC - (ERTEC)
   a) OVERVIEW
   b) GEOTECHNICAL CONSIDERATIONS
   c) CULTURAL RESOURCES
   d) BIOLOGICAL RESOURCES
   e) SUMMARY OF RESULTS

3) DISCUSSION OF PINE & WAH WAH SITING PROBLEMS - (OPEN)

4) DTN SITING - (ERTEC)
   a) DTN CRITERIA
   b) COYOTE OB
   c) BERYL OB
   d) MILFORD OB
   e) PINE VS. WAH WAH DTN
      (1) SYSTEMS CONSIDERATIONS
      (2) ENVIRONMENTAL CONSIDERATIONS - (MARTIN MARIETTA)
      (3) MITIGATIONS

5) AREA SUPPORT CENTER SITING - (ERTEC)
   a) CRITERIA
   b) TULE VS. WHIRLWIND

6) OB SITING / CLUSTER STATUS DISCUSSION - (OPEN)

FIELD SURVEYS, IOC VALLEYS

AGENDA

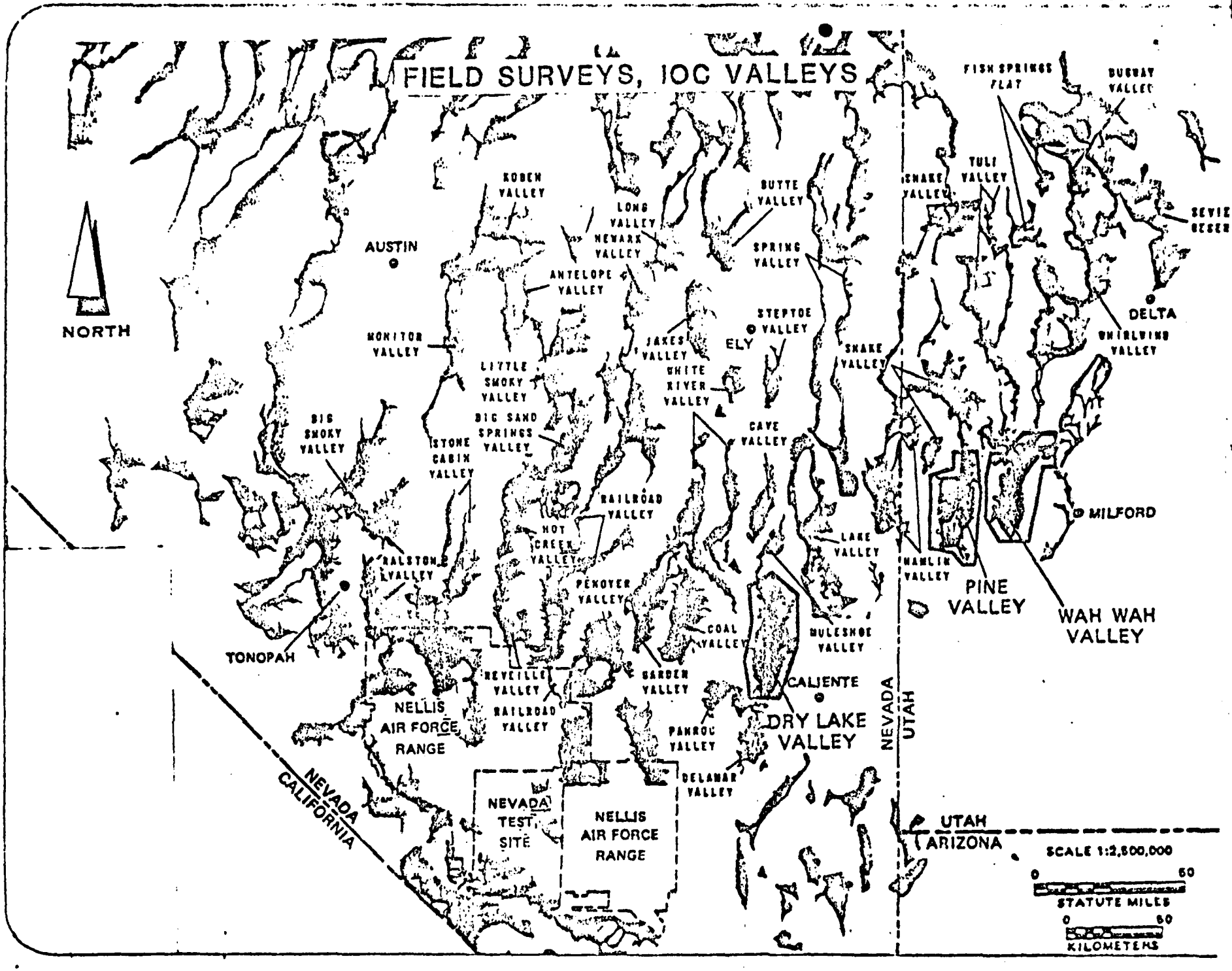
1. OVERVIEW OF PROGRAM
    a. Definition
    b. Objectives
    c. Methodology
    d. Schedule

2 GEOTECHNICAL CONSIDERATIONS
    a. Methodology
    b. Factors Affecting Shelter Locations
    c. Results, Wah Wah Valley
    d. Results, Pine Valley

3 CULTURAL RESOURCES
    a. Methodology
    b. Findings, Wah Wah Valley
    c. Findings, Pine Valley

4 BIOLOGICAL RESOURCES
    a. Methodology
    b. Findings, Wah Wah Valley
    c. Findings, Pine Valley

5 SUMMARY OF RESULTS


FIELD SURVEYS, IOC VALLEYS
NORTH
AUSTIN
KOBEH VALLEY
LONG VALLEY
NEWARK VALLEY
ANTELOPE VALLEY
BUTTE VALLEY
SPRING VALLEY
FISH SPRINGS FLAT
BURBAY VALLEY
SNAKE VALLEY
TULI VALLEY
SEVIE DESER
DELTA
WHIRLWIND VALLEY
MONITOR VALLEY
JAKES VALLEY
ELY
STEPTOE VALLEY
SNAKE VALLEY
LITTLE SMOKY VALLEY
WHITE RIVER VALLEY
BIG SMOKY VALLEY
BIG SAND SPRINGS VALLEY
CAVE VALLEY
STONE CABIN VALLEY
RAILROAD VALLEY
HOT CREEK VALLEY
MILFORD
LAKE VALLEY
HAMLIN VALLEY
RALSTON VALLEY
PENOYER VALLEY
PINE VALLEY
WAH WAH VALLEY
COAL VALLEY
HORSESHOE VALLEY
TONOPAH
BEVEILLE VALLEY
GARDEN VALLEY
CALIENTE
NELLIS AIR FORCE RANGE
RAILROAD VALLEY
DRY LAKE VALLEY
NEVADA
UTAH
PANROC VALLEY
DELAMAR VALLEY
NEVADA CALIFORNIA
NEVADA TEST SITE
NELLIS AIR FORCE RANGE
UTAH
ARIZONA
SCALE 1:2,500,000
0 50
STATUTE MILES
0 80
KILOMETERS

FIELD SURVEYS, IOC VALLEYS

OBJECTIVES

- TO TEST FIELD PROCEDURES FOR DETERMINATION OF SHELTER, CMF, AND RSS LOCATIONS
- TO PROVIDE LEGAL DESCRIPTIONS FOR LAND WITHDRAWAL PURPOSES
- TO ASSESS ENVIRONMENTAL CONDITIONS AT SHELTER, CMF AND RSS SITES AND ALONG SOME ROAD CORRIDORS AND DETERMINE WHAT CHANGES ARE NEEDED TO MINIMIZE IMPACTS
- TO IDENTIFY PROBLEMS ASSOCIATED WITH PRESENT LAYOUT CRITERIA AND PROCEDURES
- TO DETERMINE THE NUMBER OF SITES TO BE RELOCATED FOR GEOTECHNICAL REASONS

FIELD SURVEYS, IOC VALLEYS

- FIELD WORK WILL BE PERFORMED IN THE FOLLOWING VALLEYS:

  DRY LAKE, NEVADA - 10 CLUSTERS
  PINE, UTAH - 5 CLUSTERS
  WAH WAH, UTAH - 5 CLUSTERS

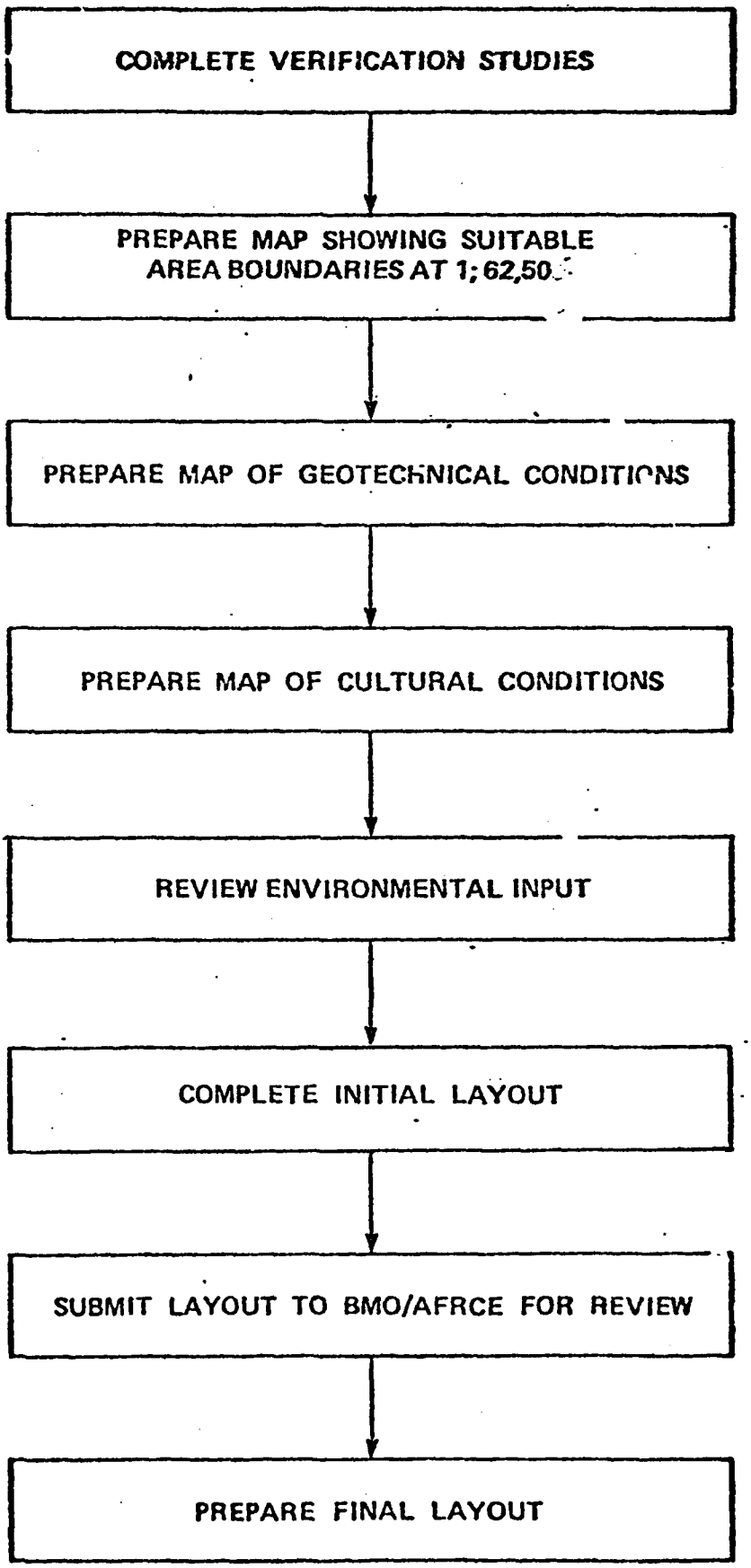
- FIELD SURVEYS WILL BE PERFORMED TO LOCATE AND PLACE MONUMENTS AT ALL SHELTER, CMF, AND RSS SITES

- THE ONLY ROADS TO BE STAKED ARE THE DTN AND ONE CLUSTER IN DRY LAKE VALLEY

- ENVIRONMENTAL INSPECTIONS WILL BE MADE AT EACH SITE AND ALONG A 150 FOOT WIDE CORRIDOR ALONG THE STAKED ROAD ALIGNMENTS

- ENVIRONMENTAL REPORTS AND A GENERAL REPORT OF THE FIELD PROGRAM WILL BE PREPARED

VALLEY SHELTER LAYOUT METHODOLOGY

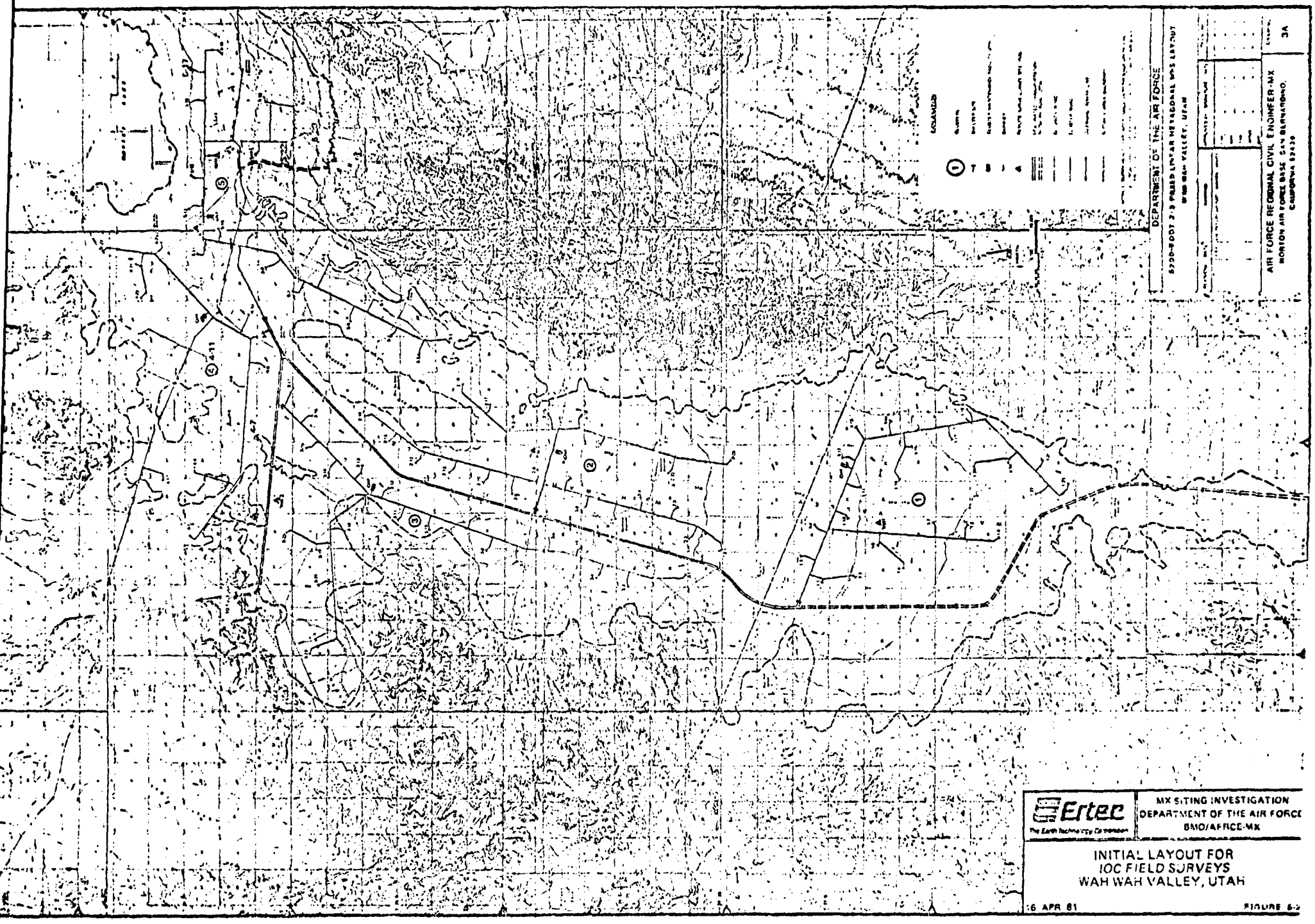


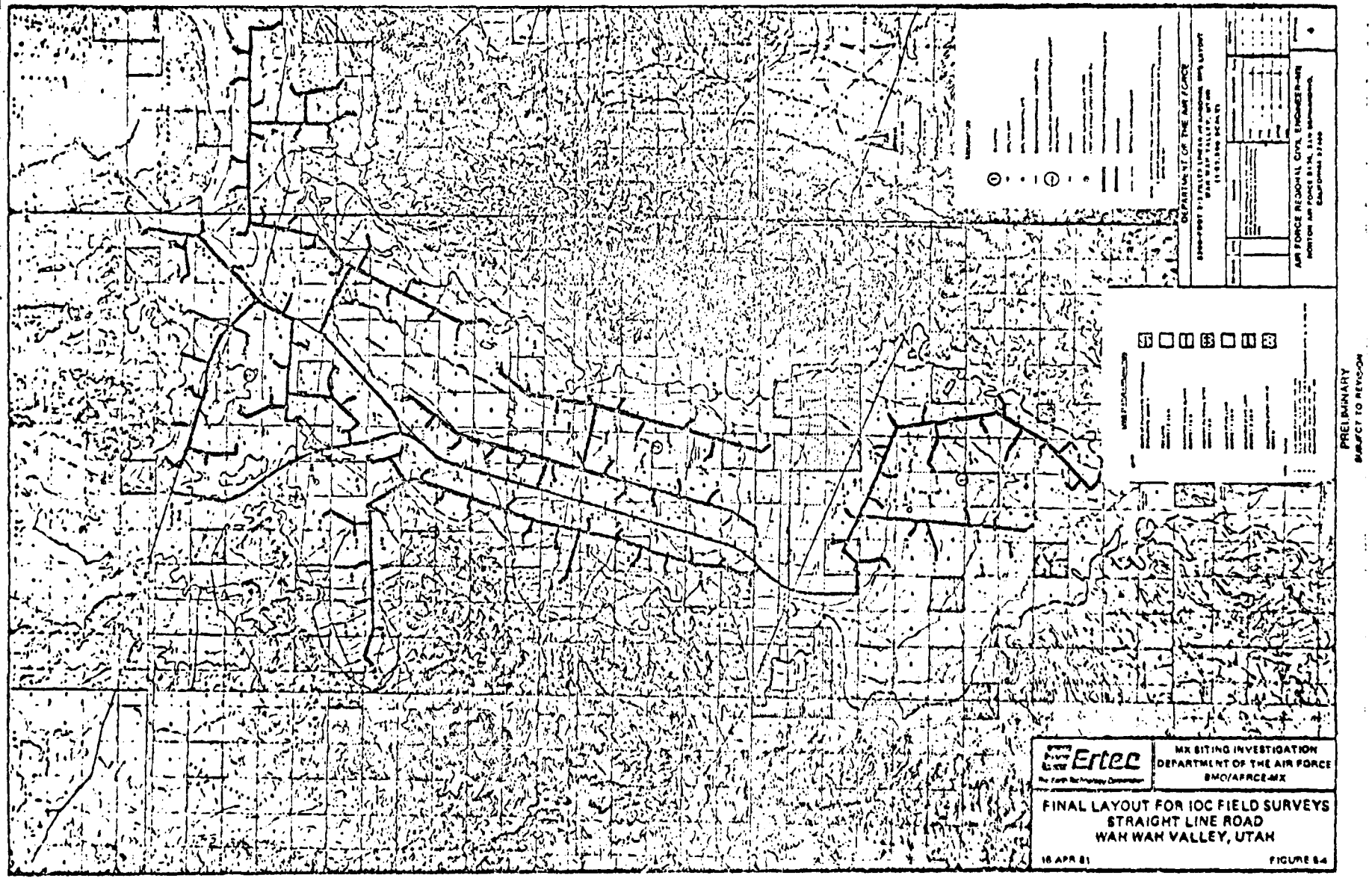
MX SITE LAYOUT REQUIREMENTS, HORIZONTAL SHELTER

- OPEN HEXAGONAL PATTERN
- SHELTER SPACING, 5200′ ± 200′
- NOT MORE THAN 3 NEAREST NEIGHBORS
- POSITIONS FOR 34 OR 35 SHELTERS, SHOW 23
- MINIMUM HORIZONTAL RADIUS OF CURVATURE 400′
- SHELTERS ORIENTED AWAY FROM NEAREST NEIGHBOR BY AT LEAST 55°
- AVOID USACE RECOMMENDED EXCLUSIONS
- POWER LINES <50 KV–750′
  50–250 KV–1250′
  >250 KV–2500′
- QUANTITY DISTANCES (AFR 127–100)
  Protective structure and CMF to:
  - Existing roads with ADT >50 ---1780′
  - Inhabited building ---------- 2965′
  - Pipelines ---------- 300′
- CLUSTER ROAD GRADES TO NOT EXCEED 5%

MX SITE LAYOUT CONSIDERATIONS

- AVOID ADVERSE TERRAIN
- AVOID PERENNIAL DRAINAGES
- AVOID PLAYAS
- AVOID ACTIVE AND POTENTIALLY ACTIVE FAULTS
- AVOID PRIVATE PROPERTY, IF POSSIBLE
- AVOID AREAS SUBJECT TO SHEET FLOODING, IF POSSIBLE
- NORTH-SOUTH ORIENTATION OF CLUSTER ROADS WHENEVER POSSIBLE
- AVOID MINING DISTRICTS, ACTIVE MINES AND AREAS OF HIGH MINERAL POTENTIAL
- AVOID WILDERNESS AREAS, PARKS, MONUMENTS, INDIAN RESERVATIONS, WILDLIFE REFUGES, ETC.

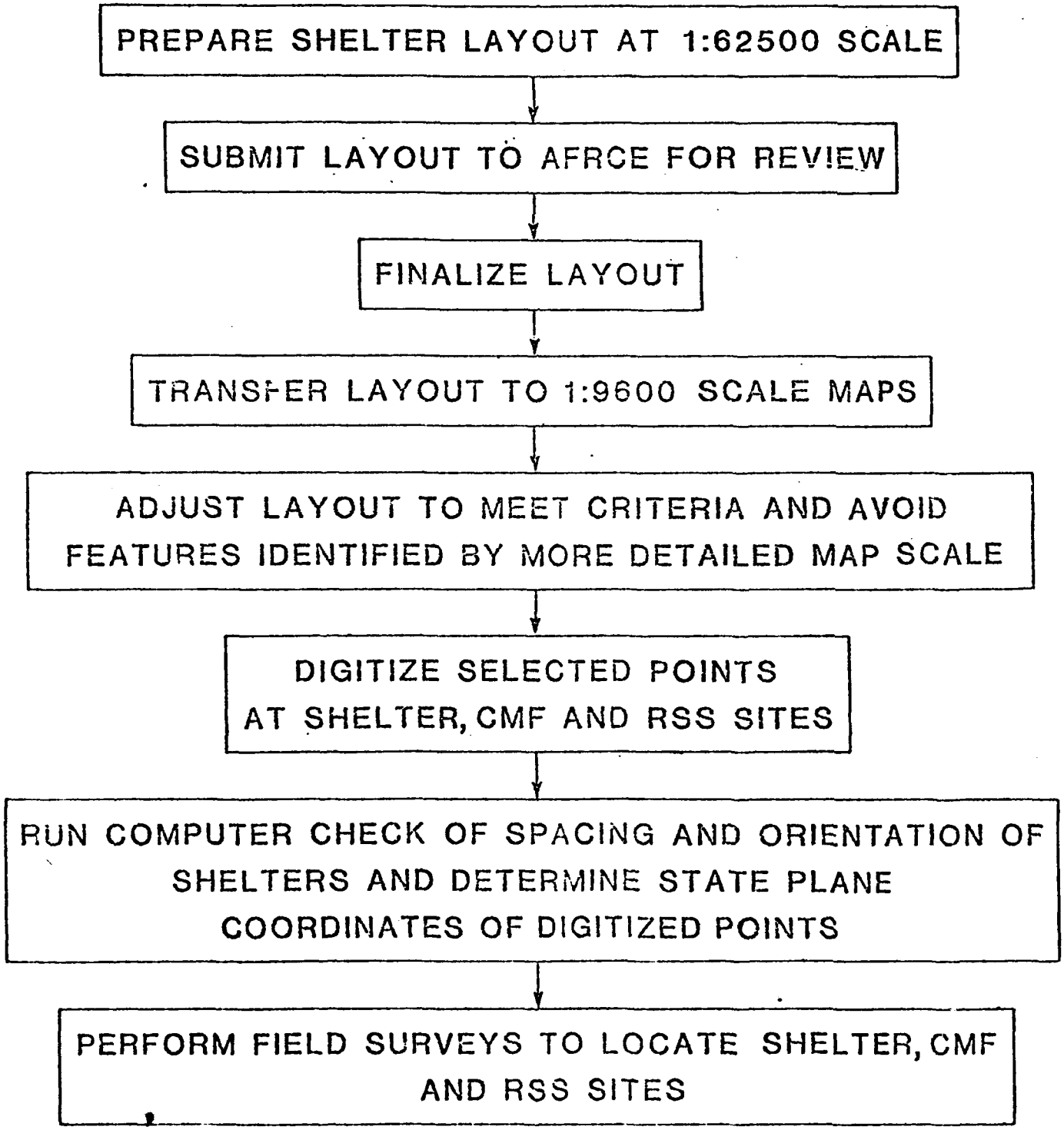

DEPARTMENT OF THE AIR FORCE
AIR FORCE REGIONAL CIVIL ENGINEER-MX
NORTON AIR FORCE BASE, SAN BERNARDINO, CALIFORNIA 92409
3A
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
INITIAL LAYOUT FOR
IOC FIELD SURVEYS
WAH WAH VALLEY, UTAH
6 APR 81
FIGURE 5-2


PRELIMINARY
SUBJECT TO REVISION
Ertec
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
FINAL LAYOUT FOR IOC FIELD SURVEYS
STRAIGHT LINE ROAD
WAH WAH VALLEY, UTAH
16 APR 81
FIGURE 6-4

INITIAL LAYOUT FOR
IOC FIELD SURVEYS
PINE VALLEY, UTAH

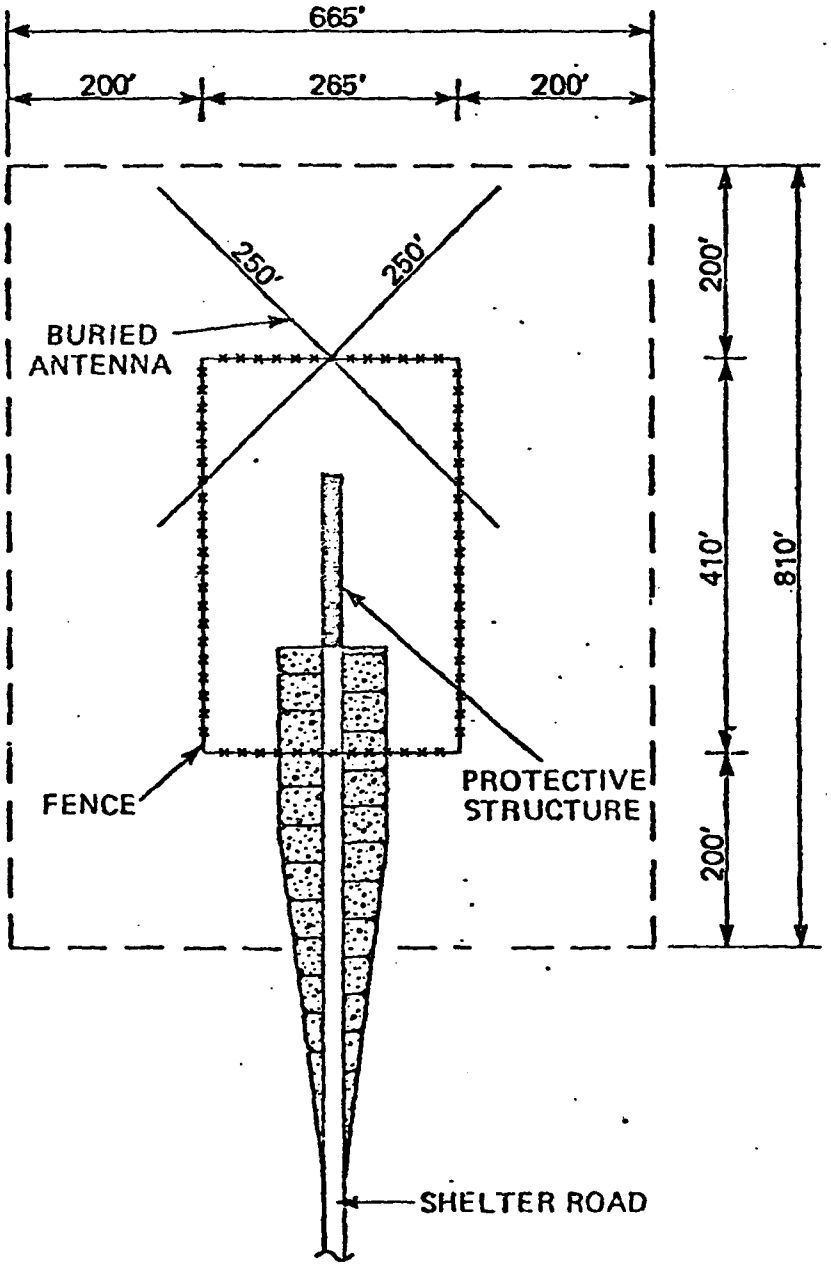
FINAL LAYOUT FOR IOC FIELD SURVEYS
STRAIGHT LINE ROADS
PINE VALLEY, UTAH

FIELD SURVEY METHODOLOGY
IOC VALLEYS



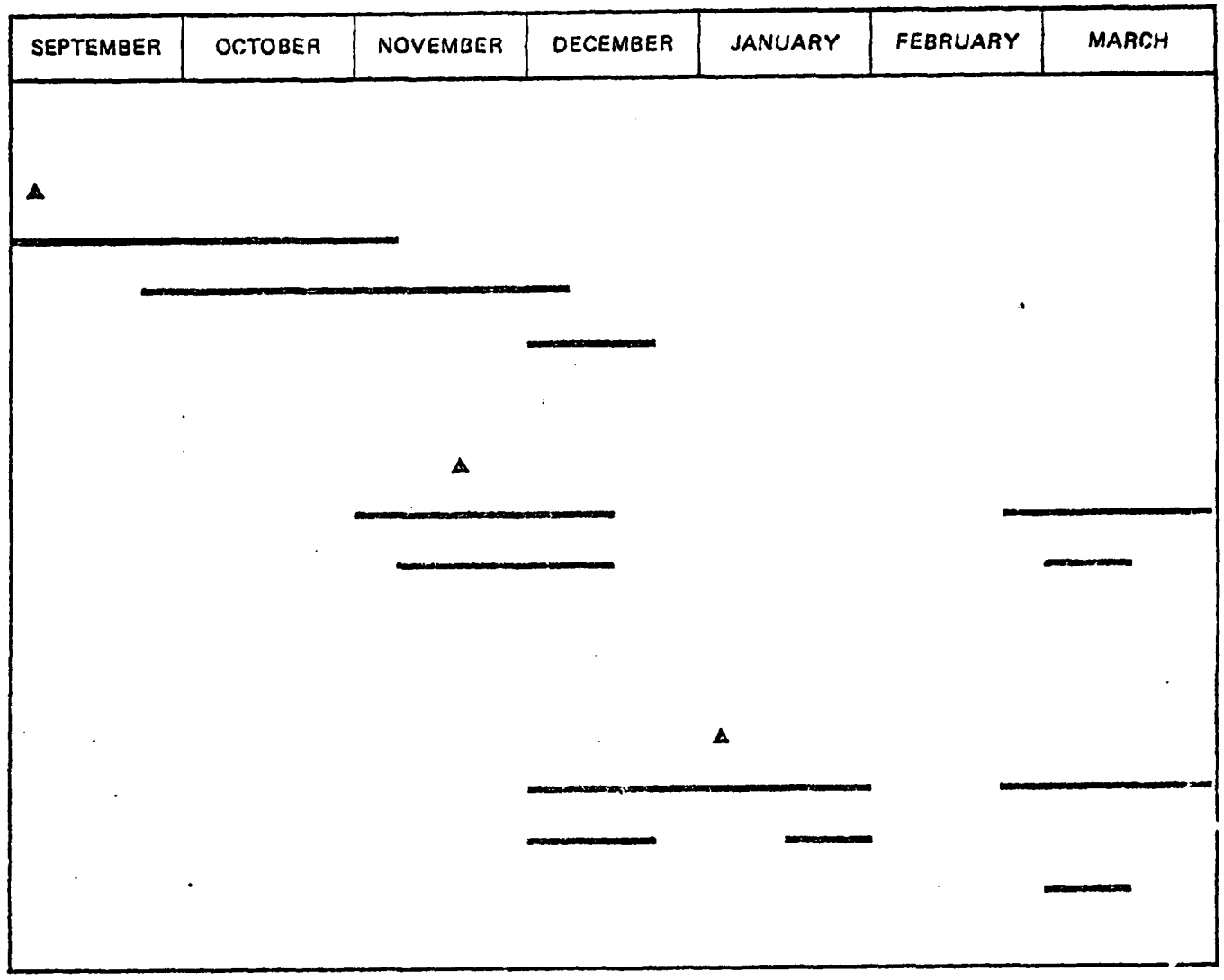
'66 transparency
mounting frame

ENVIRONMENTAL SURVEY AREA AT SHELTER SITE



no.

SCHEDULE OF [illegible] FIELD [illegible]



GEOTECHNICAL METHODOLOGY

REVIEW 1:9600 MAPS

- REVIEW 1:25,000 AERIAL PHOTOGRAPHS
- REVIEW VERIFICATION DATA
- PERFORM SITE INSPECTIONS AND IDENTIFY SITES WITH PROBLEMS . PREPARE FIELD SKETCHES AND TAKE PHOTOGRAPHS
- PREPARE LIST OF RECOMMENDED RESITINGS AND REASONS FOR RESITINGS
- REVIEW OF LIST BY ERTEC ENGINEERS AND GEOLOGIST AND BY PERSONNEL FROM AFRCE, BMO, TRW, AND CORPS OF ENGINEERS
- FIELD REVIEW OF SELECTED SITES
- FINAL RESITING DECISIONS BY AFRCE

GEOTECHNICAL FACTORS AFFECTING SHELTER LOCATIONS

I SUITABLE AREA FACTORS (SITING CRITERIA)

- Surface or Shallow Rock
- Surface or Shallow Water
- Adverse Terrain
- Slopes Greater Than 10%

II SITEABLE AREA FACTORS (EVALUATION)

- Drainages and Washes
- Active and Potentially Active Faults
- Playa
- Ground Cracks
- Potential For Sheet Flooding

SUMMARY OF RESULTS
FIELD SURVEYS, IOC VALLEYS

NUMBER OF SHELTERS RESITED FOR GEOTECHNICAL REASONS

SUITABLE AREA FACTORS	WAH WAH VALLEY	PINE VALLEY
Surface or Shallow Rock	1	0
Surface or Shallow Water	0	0
Adverse Terrain	0	0
Slope Greater Than 10%	0	0
Sub Total	1	0
SITEABLE AREA FACTORS		
Drainages and Washes	13	14
Active and Potentially Active Faults	0	1
Playa	0	1
Ground Cracks	0	0
Potential For Sheet Flooding	0	0
Sub Total	13	16
TOTAL	14	16

ENVIRONMENTAL SURVEY PROCEDURES

- DEVELOPED IN CLOSE COOPERATION WITH BUREAU OF LAND MANAGEMENT AND U.S. AIR FORCE
- I O C VALLEYS TO SERVE AS TEST OF PROCEDURES
- PROCEDURES MODIFIED AS A RESULT OF FIELD EXPERIENCE

SURVEY UNITS:

1. HORIZONTAL SHELTER SITES (HSS)

2. REMOTE SURVEILLANCE SITES (RSS)

3. CLUSTER MAINTENANCE FACILITIES (CMF)

SURVEY AREAS:

1. HSS 810 FEET X 665 FEET (12.36 ACRES)

2. RSS 300 FEET X 300 FEET (2.06 ACRES)

3. CMF 1,140 FEET X 750 FEET (19.62 ACRES)

QUALITY ASSURANCE

1. FORMS (SAMPLE UNIT FORM, WILDLIFE & PLANT FORMS, MASTER SPECIES LIST, SITE RECORD FORMS)
2. JOURNALS (FIELD NOTES)
3. VOUCHER COLLECTIONS (BIOLOGY ONLY)
4. ADVISORS & EXPERTS
5. VERIFICATION PHOTOS

AGENCY CONTACTS
CULTURAL RESOURCES

BUREAU OF LAND MANAGEMENT STATE
AND DISTRICT OFFICES

UTAH STATE HISTORICAL SOCIETY
ANTIQUITIES SECTION, SALT LAKE CITY

UNIVERSITY OF UTAH

SOUTHERN UTAH STATE UNIVERSITY

BLM LIST OF CULTURAL RESOURCES REQUIRING AVOIDANCE

PREHISTORIC

1. SITES OR FEATURES LIKELY TO HAVE DEPTH
2. ROCK SHELTERS AND ROCK ART SITES IMMEDIATELY EXPOSED TO FACILITY LOCATION
3. SITES THAT ARE:
   - A. LARGE LITHIC SCATTERS WITH TEMPORALLY OR CULTURALLY DIAGNOSTIC ARTIFACTS
   - B. MULTI-COMPONENT
   - C. MULTIPLE ACTIV'TY AREAS
4. BURIAL SITES
5. ROCK ALIGNMENTS AND CAIRNS

HISTORIC

1. STRUCTURES OLDER THAN 50 YEARS
2. MULTI-COMPONENT OR MULTIPLE ACTIVITY SITES
3. MINING DEVELOPMENTS
4. CEMETERIES
5. EARLY ROADS AND TRAILS

NOTE:

IN ADDITION TO THESE CRITERIA, IT WAS AGREED THAT SINCE SO FEW ARCHEOLOGICAL SITES WERE DISCOVERED IN PINE AND WAH WAH VALLEYS CERTAIN LITHIC SCATTERS IN THESE VALLEYS WOULD REQUIRE AVOIDANCE

CULTURAL RESOURCE SURVEY PROCEDURES

1. 25- METER TRANSECTS (BLM "INTENSIVE" SURVEY)

2. DATA RECORDED ON STANDARD SAMPLE UNIT RECORD AND ANTIQUITIES SITE FORMS DEVELOPED FOR THE MX PROJECT

CULTURAL RESOURCE COLLECTION POLICY

1. ISOLATED ARTIFACTS DIAGNOSTIC OF CULTURE OR CHRONOLOGY

WAH WAH VALLEY

CULTURAL RESOURCES FINDINGS

A. PREHISTORIC

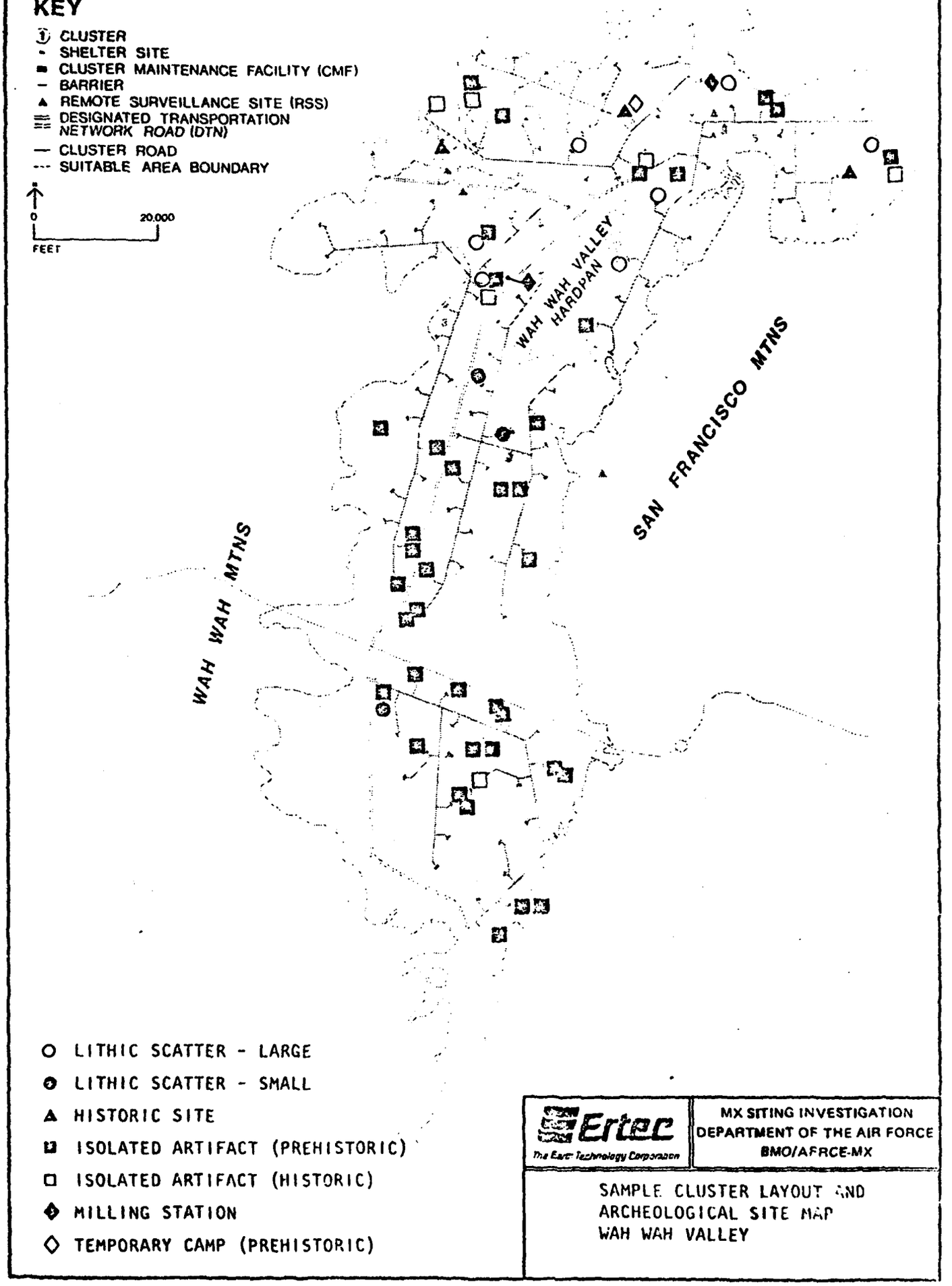
1. ISOLATED ARTIFACTS		39
2. LITHIC SCATTERS		11
	TOTAL	50

B. HISTORIC

1. ISOLATED ARTIFACTS		6
2. SCATTERS		2
	TOTAL	8

C. PREHISTORIC AND HISTORIC

1 SMALL TEMPORARY CAMPSITE WITH HISTORIC TRASH DUMP


KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
WAH WAH VALLEY HARDPAN
SAN FRANCISCO MTNS
WAH WAH MTNS
LITHIC SCATTER - LARGE
LITHIC SCATTER - SMALL
HISTORIC SITE
ISOLATED ARTIFACT (PREHISTORIC)
ISOLATED ARTIFACT (HISTORIC)
MILLING STATION
TEMPORARY CAMP (PREHISTORIC)
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MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
SAMPLE CLUSTER LAYOUT AND
ARCHEOLOGICAL SITE MAP
WAH WAH VALLEY

WAH WAH VALLEY
CULTURAL RESITINGS

WAH WAH VALLEY

SHELTER UNITS

4/8 - LARGE LITHIC SCATTER

5/5 - LARGE LITHIC SCATTER

5/7 - LARGE LITHIC SCATTER

CLUSTER MAINTENANCE FACILITY 3 -

SMALL LITHIC SCATTER, PREHISTORIC

AND HISTORIC ISOLATES

TOTAL 4

PINE VALLEY
CULTURAL RESOURCES FINDINGS

A. PREHISTORIC

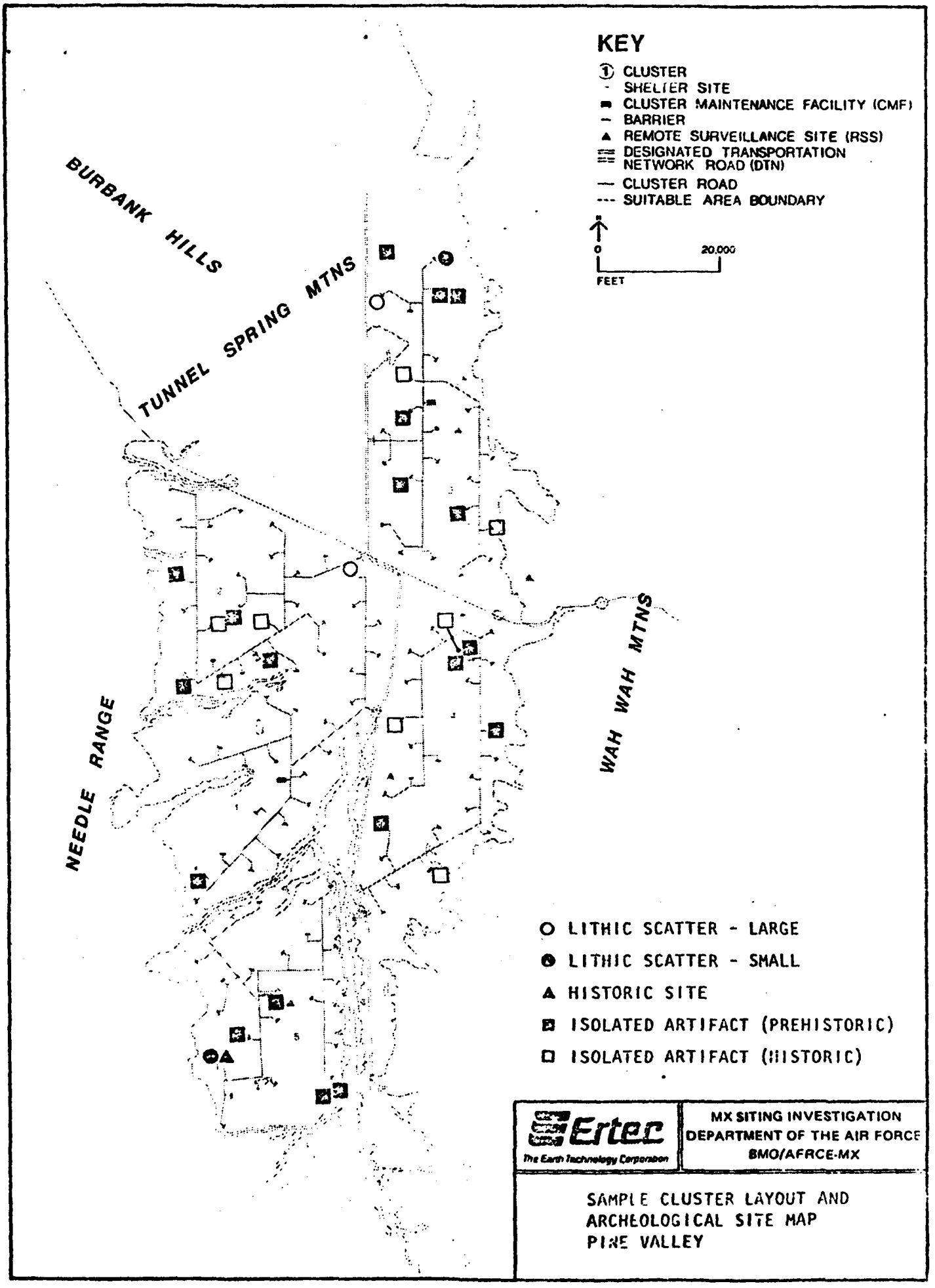
1. ISOLATED ARTIFACTS	20
2. LITHIC SCATTERS	3
TOTAL	23

B. HISTORIC

1. ISOLATED ARTIFACTS	8

C. PREHISTORIC AND HISTORIC

1. HISTORIC TRASH DUMP WITH FLAKES


KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
BURBANK HILLS
TUNNEL SPRING MTNS
NEEDLE RANGE
WAH WAH MTNS
LITHIC SCATTER - LARGE
LITHIC SCATTER - SMALL
HISTORIC SITE
ISOLATED ARTIFACT (PREHISTORIC)
ISOLATED ARTIFACT (HISTORIC)
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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
SAMPLE CLUSTER LAYOUT AND
ARCHEOLOGICAL SITE MAP
PINE VALLEY

PINE VALLEY
CULTURAL RESITINGS

PINE VALLEY

SHELTER UNITS

1/1 - LITHIC SCATTER

3/21 - LITHIC SCATTER

TOTAL 2

PURPOSE OF BIOLOGICAL STUDIES

- TO OBTAIN SITE-SPECIFIC DATA FROM IOC VALLEYS WITH EMPHASIS ON PROTECTED SPECIES AND HABITATS

- TO EVALUATE SITE-SPECIFIC IMPACTS AND MITIGATION MEASURES

- TO TEST AND IMPROVE FIELD METHODS

APPROACH TO BIOLOGICAL STUDIES

A. REVIEW AND SUMMARIZE EXISTING DATA FROM VARIOUS SOURCES:

- BLM – UTAH STATE OFFICE
  - CEDAR CITY DISTRICT OFFICE
- UTAH DIVISION OF WILDLIFE RESOURCES
- UTAH NATIVE PLANT SOCIETY
- OTHERS
  - USFWS
  - EPA
  - UNIVERSITIES

B. CONDUCT FIELD PROGRAM

- METHODS DEVELOPED IN CONJUNCTION WITH BLM
- CONDUCTED FROM NOVEMBER 1980 TO MARCH 1981

LISTS OF PROTECTED SPECIES AND HABITATS IN UTAH

- FEDERALLY "LISTED" T & E WILDLIFE (FR, MAY 20, 1980)
- FEDERALLY "LISTED", "PROPOSED", AND "CURRENTLY UNDER REVIEW" T & E PLANTS (FR, DECEMBER 15, 1980)
- "VERTEBRATE SPECIES OF WILDLIFE HAVING HIGH INTEREST TO THE STATE OF UTAH" (UDWR, JUNE, 1980)
- "STATUS OF SELECTED NONGAME WILDLIFE AND PLANT SPECIES IN UTAH" (UDWR, MAY, 1980)
- CRITICAL HABITATS AND SENSITIVE SPECIES IN PINE AND WAH WAH VALLEYS (LETTER FROM DIRECTOR OF UDWR, DEC. 15, 1980)
- "UTAH THREATENED AND ENDANGERED PLANTS" (UNPS, JAN. 1980)
- UNOFFICIAL SENSITIVE PLANTS (CEDAR CITY BLM, JAN. 16, 1981)

CRITERIA FOR RECOMMENDED BIOLOGY RESITING

GENERAL APPROACH

- CASE BY CASE BASIS - NO HARD AND FAST RULE
- OVERALL ECOSYSTEM CONSIDERATION
- BIOLOGICAL FOCUS

DECISION BASE

- ON-SITE SURVEY RESULTS
- BACKGROUND RESEARCH (SPECIES, RANGE, POPULATION, HABITS, AND HABITAT)
- BLM / DEPT. OF WILDLIFE CONCERNS
- OUTSIDE EXPERTS IN SPECIAL AREAS
- LEGISLATIVE (FEDERAL, STATE, PRIVATE LISTINGS, FLPMA)
- FEDERAL, STATE, AND LOCAL STATUS

BIOLOGY
FIELD METHODOLOGY

SITE LOCATION AND STAKING

TRAVERSES

- OVERVIEW OF VEGETATION, WILDLIFE, ABIOTIC CONDITIONS, AND DISTURBANCE FACTORS
- POTENTIAL T & E PLANTS, OTHER IMPORTANT FINDS MAPPED ON GRID

TRANSECTS

- 50-M LINE-INTERCEPTS
- PERENNIAL PLANTS COUNTED AND MEASURED

DOCUMENTATION

- VOUCHER COLLECTION
- PHOTOGRAPHY
- FIELD JOURNALS
- STANDARD DATA FORMS

BIOLOGY
QUANTITATIVE DATA ANALYSIS

$$\text{COVER (\%)} = \frac{\text{TOTAL PLANT COVER (dm)}}{\text{DISTANCE OF TRANSECT (dm)}} \times 100$$

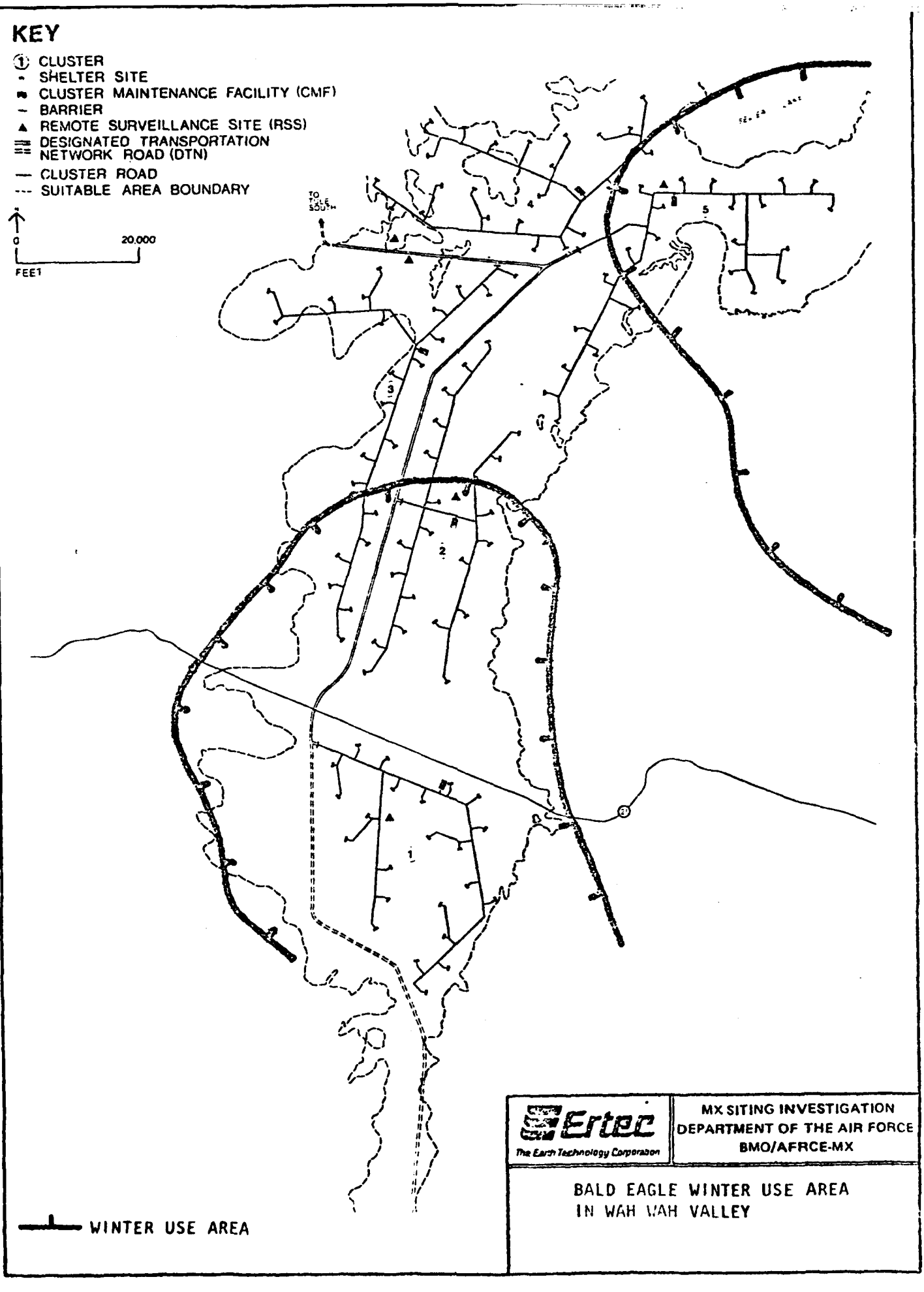
$$\text{RELATIVE COVER (\%)} = \frac{\text{TOTAL COVER SPECIES A (dm)}}{\text{TOTAL COVER ALL SPECIES (dm)}} \times 100$$

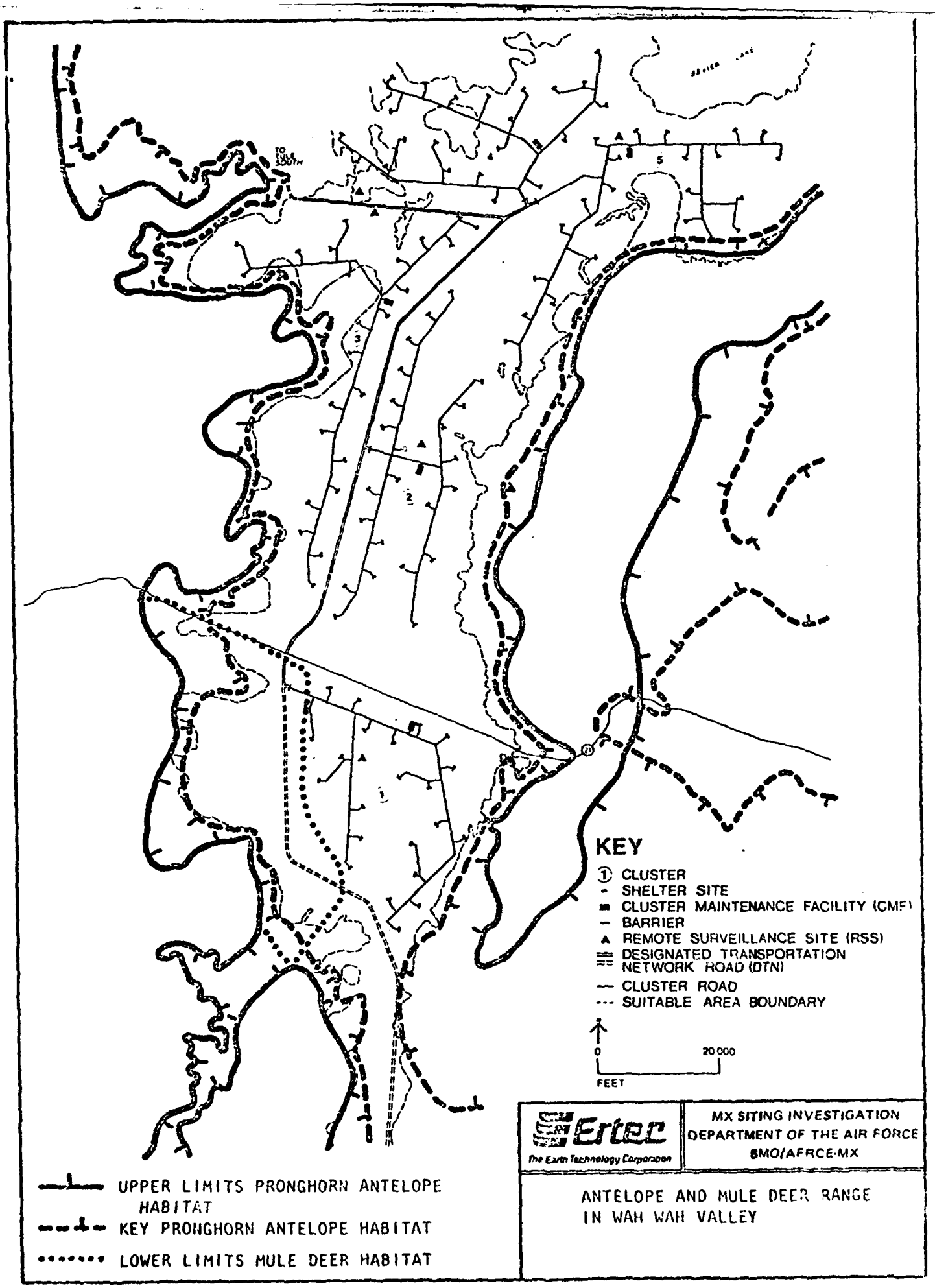
$$\text{DENSITY (\#/100dm)} = \frac{\text{\# PLANTS SPECIES A}}{\text{DISTANCE OF TRANSECT(dm)}} \times 100$$

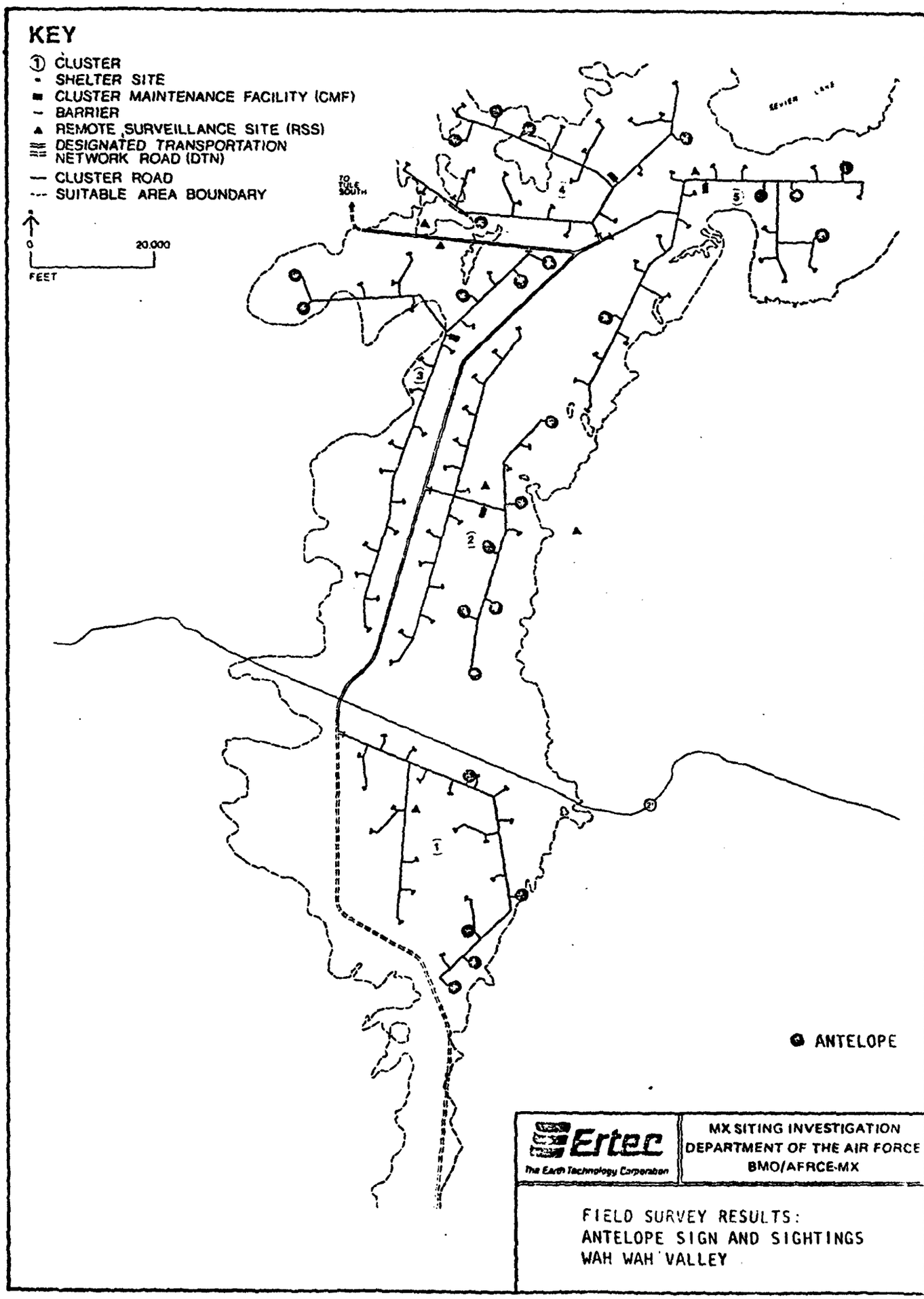
$$\text{RELATIVE DENSITY (\%)} = \frac{\text{\# PLANTS SPECIES A}}{\text{\# PLANTS ALL SPECIES}} \times 100$$

WAH WAH VALLEY
BIOLOGY FINDINGS

- 7 SITES - CORYPHANTHA VIVIPARA AND SCLEROCACTUS PUBISPINUS (1-2 INDIVIDUALS EACH)
- 50 SITES - FOX DENS
- 21 SITES -ANTELOPE SIGNS (NO PATTERN)
- MORE THAN HALF THE SITES WITHIN BALD EAGLE WINTER USE AREA
- CLUSTER 5 - RELATIVELY DIVERSE (CACTUS, ANTELOPE, FOX)
- 13 POSSIBLE T & E PLANT SPECIES
- 3 POSSIBLE T & E PLANT VARIETIES


KEY
① CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
TO TULE SOUTH
1
2
3
4
5
WINTER USE AREA
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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
BALD EAGLE WINTER USE AREA
IN WAH WAH VALLEY


KEY
1 CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
UPPER LIMITS PRONGHORN ANTELOPE HABITAT
KEY PRONGHORN ANTELOPE HABITAT
LOWER LIMITS MULE DEER HABITAT
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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
ANTELOPE AND MULE DEER RANGE
IN WAH WAH VALLEY


KEY
① CLUSTER
• SHELTER SITE
■ CLUSTER MAINTENANCE FACILITY (CMF)
– BARRIER
▲ REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
— CLUSTER ROAD
--- SUITABLE AREA BOUNDARY
0
20,000
FEET
TO TULE SOUTH
ANTELOPE
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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
FIELD SURVEY RESULTS:
ANTELOPE SIGN AND SIGHTINGS
WAH WAH VALLEY

WAH WAH VALLEY RECOMMENDED RESITINGS FOR BIOLOGY

WAH WAH VALLEY

NO RESITINGS

PINE VALLEY BIOLOGY FINDINGS

SITE SPECIFIC

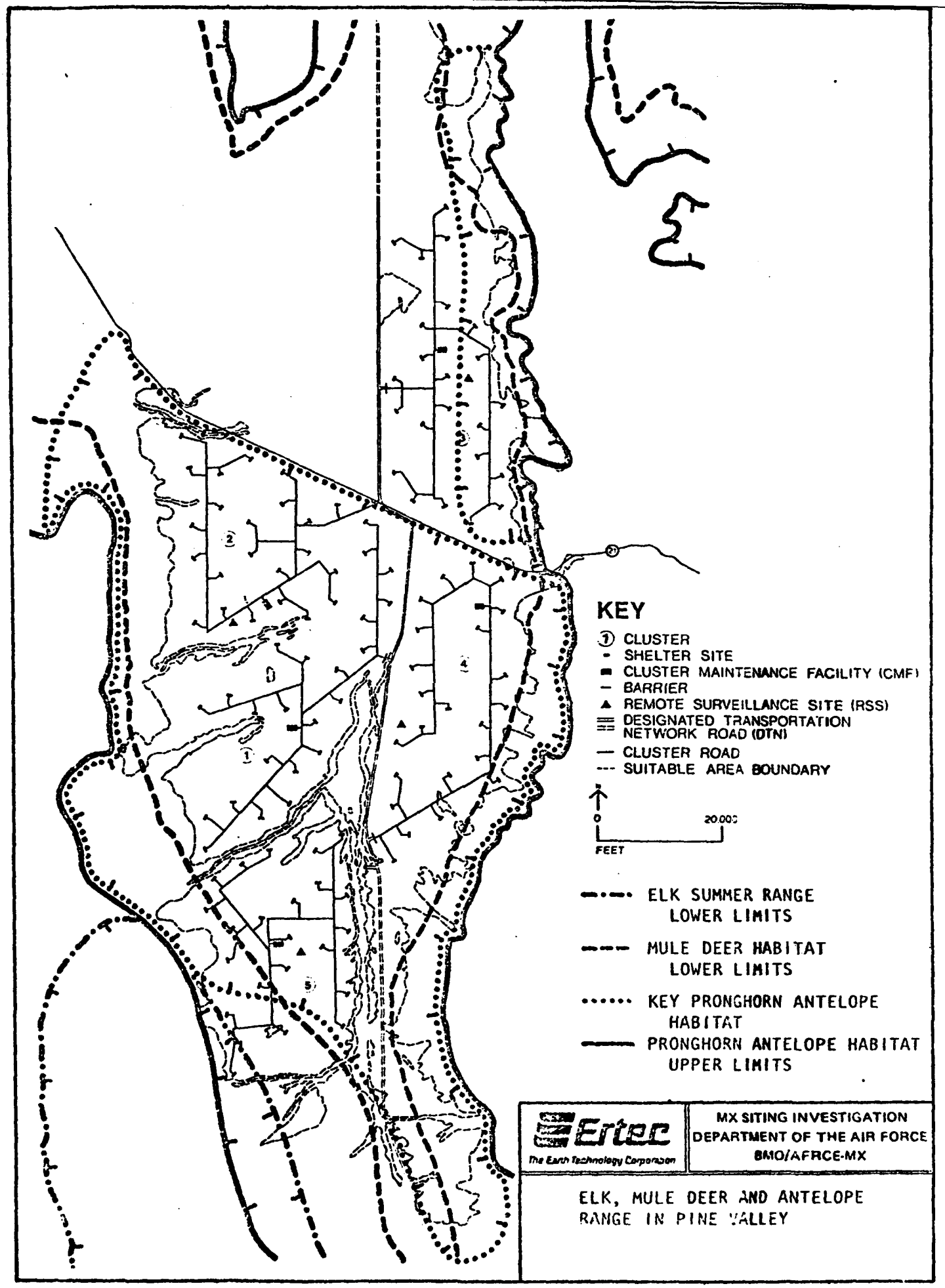
- 2/13, 2/15, RSS 1 – EAGLE FORAGE AREA
- 3/6 – 6 C. vivipara, 3 S. pubispinus
- 4/7 – 32 C. vivipara
- 4/10 – 11 Sphaeralcea caespitosa,
  2 C. vivipara

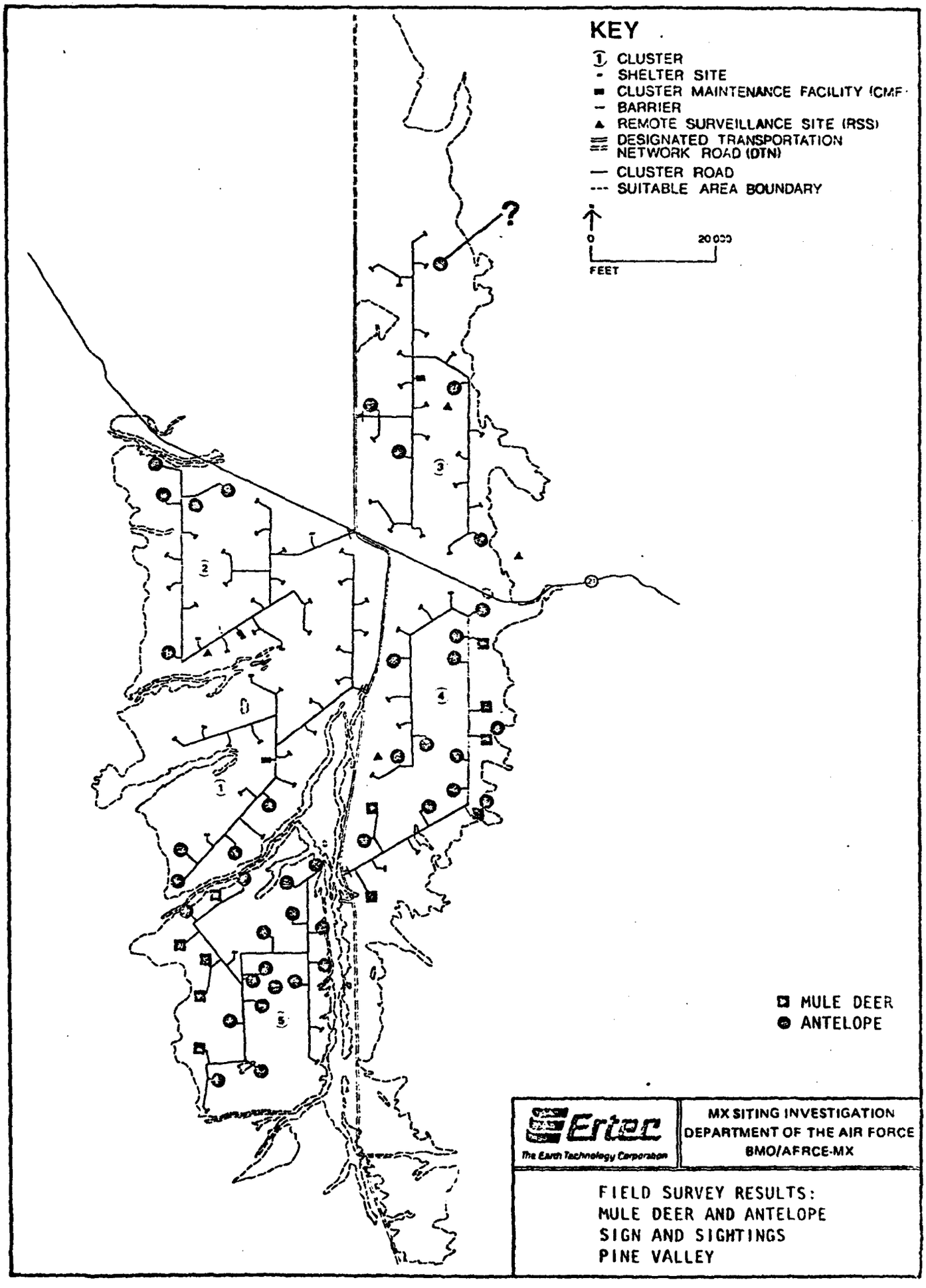
NUMEROUS SITES

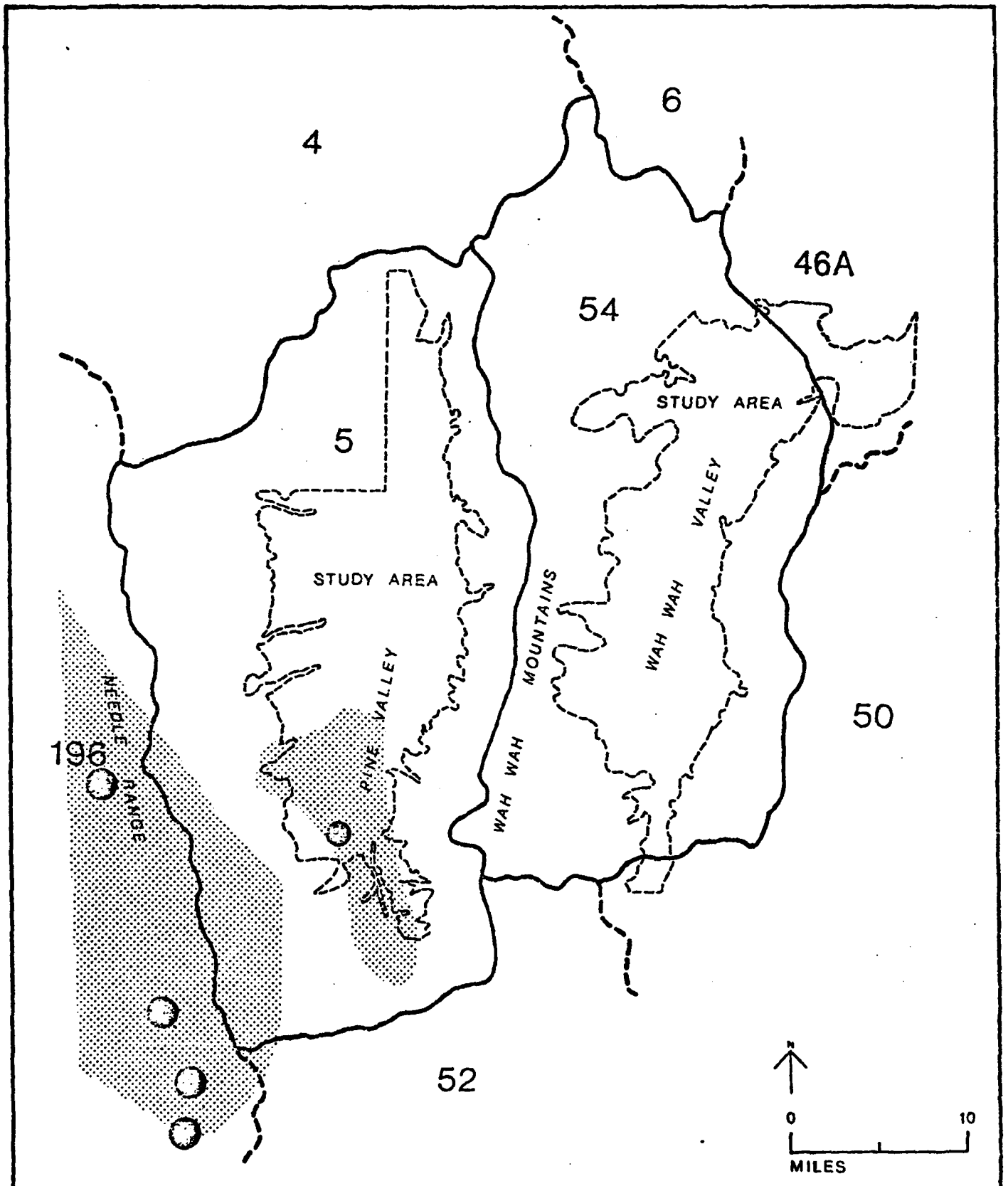
- 22 POSSIBLE T & E PLANT SPECIES
- 4 POSSIBLE T & E PLANT VARIETIES

CLUSTER 5

- SAGE GROUSE HABITAT AND STRUTTING GROUND AREA: SIGNS OF CURRENT USAGE PRESENT
- ANTELOPE SIGN (16 SITES)
- MULE DEER SIGN (5 SITES)
- MAJORITY OF JACKRABBIT (PREY FOR RAPTORS)
- ELK HABITAT (NO SIGNS EVIDENT)


KEY
1 CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
ELK SUMMER RANGE LOWER LIMITS
MULE DEER HABITAT LOWER LIMITS
KEY PRONGHORN ANTELOPE HABITAT
PRONGHORN ANTELOPE HABITAT UPPER LIMITS
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ELK, MULE DEER AND ANTELOPE RANGE IN PINE VALLEY

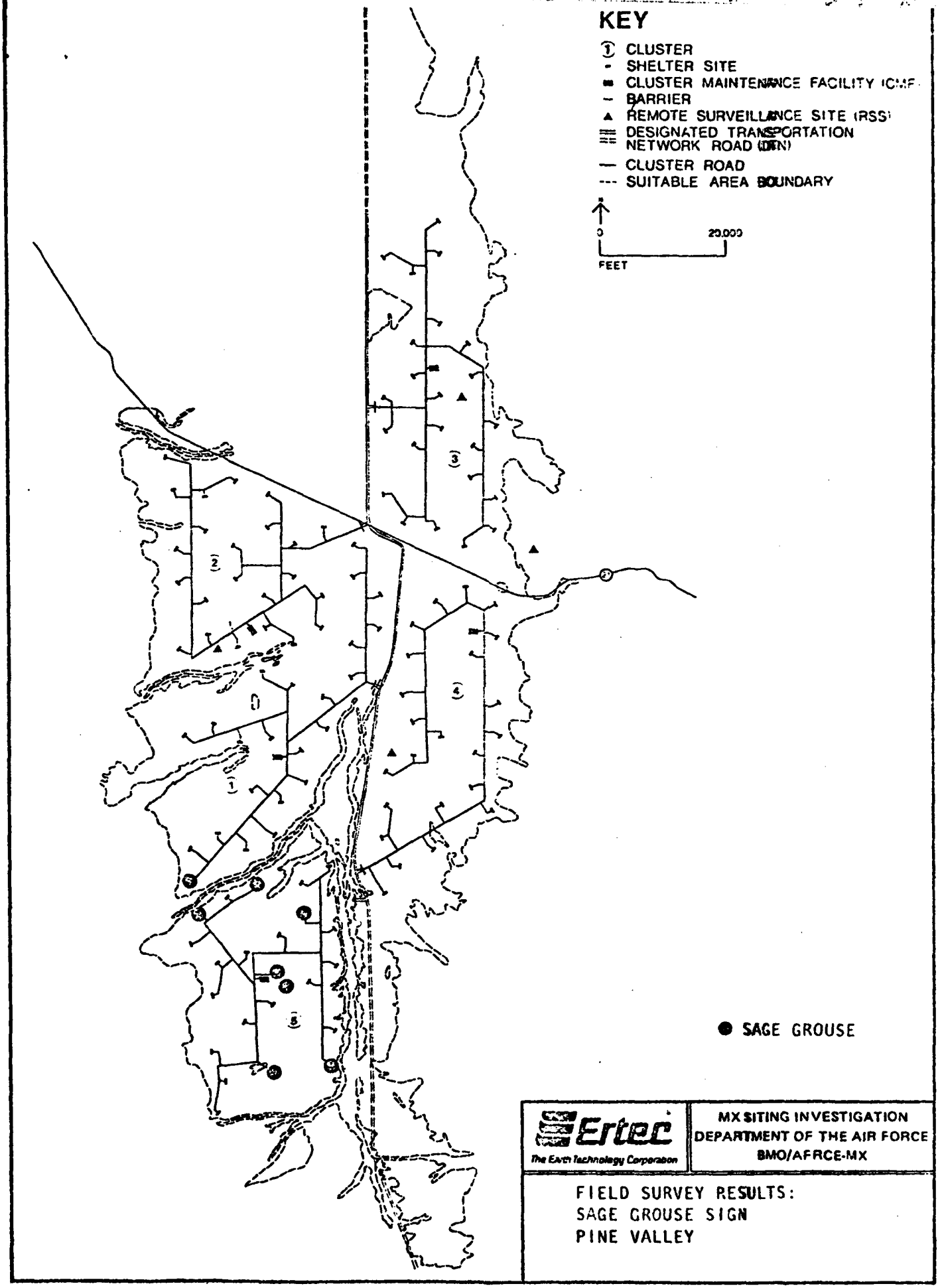

KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20 000
FEET
MULE DEER
ANTELOPE
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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
FIELD SURVEY RESULTS:
MULE DEER AND ANTELOPE
SIGN AND SIGHTINGS
PINE VALLEY



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SAGE GROUSE RANGE AND STRUTTING GROUNDS IN THE PINE AND WAH WAH VICINITY



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DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX

FIELD SURVEY RESULTS:
SAGE GROUSE SIGN
PINE VALLEY

PINE VALLEY RECOMMENDED RESITINGS FOR BIOLOGY

SHELTER UNITS

3/6	- 6	C. vivipara, 3 S. pubispinus
4/7	- 32	C. vivipara
4/10	- 1	Sphaeralcea caespitosa,
	2	C. vivipara
5/12	- MANY	Cryptantha, 4 Penstemon,
	1	Eriogonum

CLUSTER 5

RESULTS OF FIELD SURVEYS
WAH WAH VALLEY, UTAH

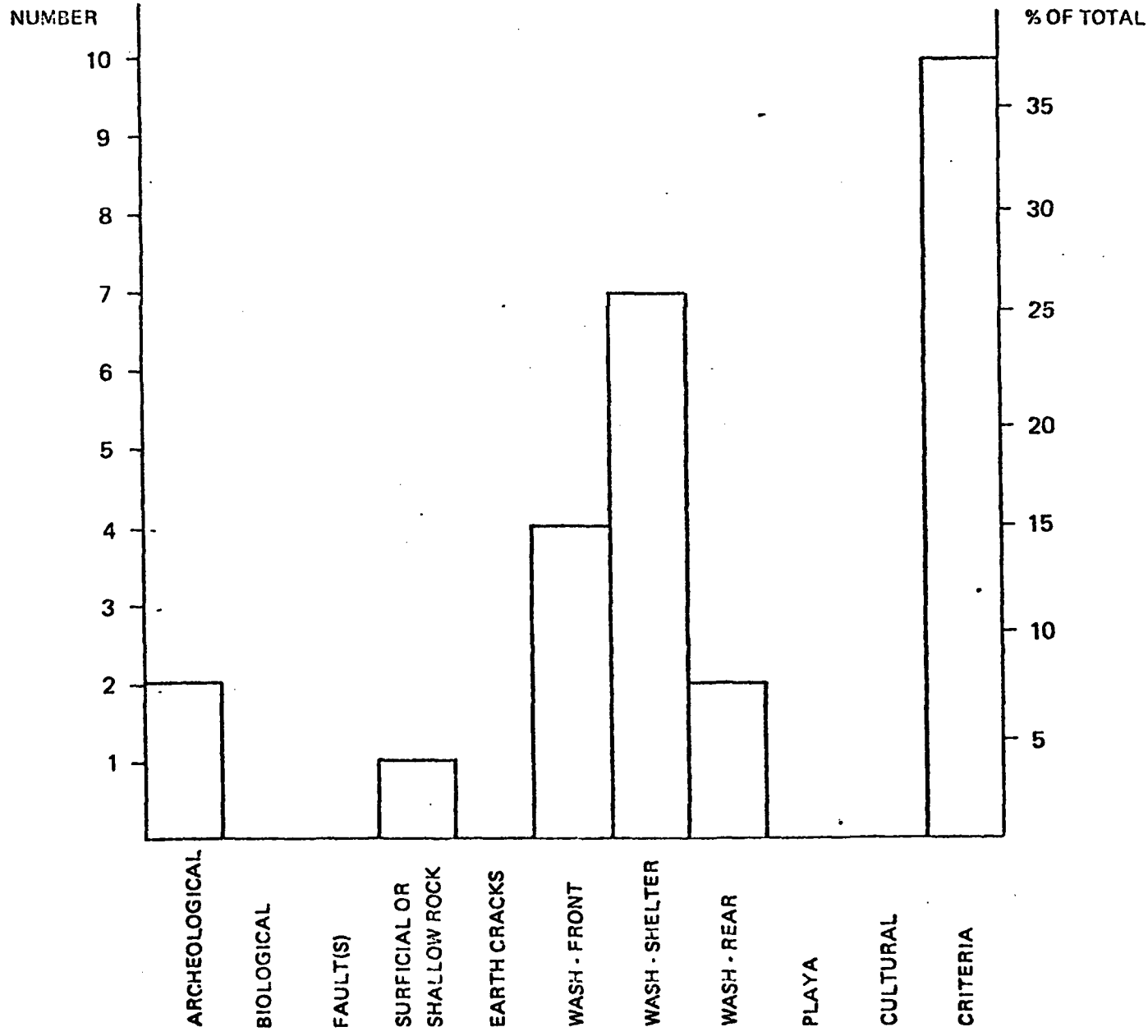
FACILITIES SITED

115 SHELTER SITES (HSS)

5 CLUSTER MAINTENANCE FACILITIES (CMF)

4 REMOTE SURVEILLANCE SITES (RSS)
(NOT APPLICABLE AFTER 12 MARCH 1981)

APPROVED RESITINGS: 26 SHELTERS

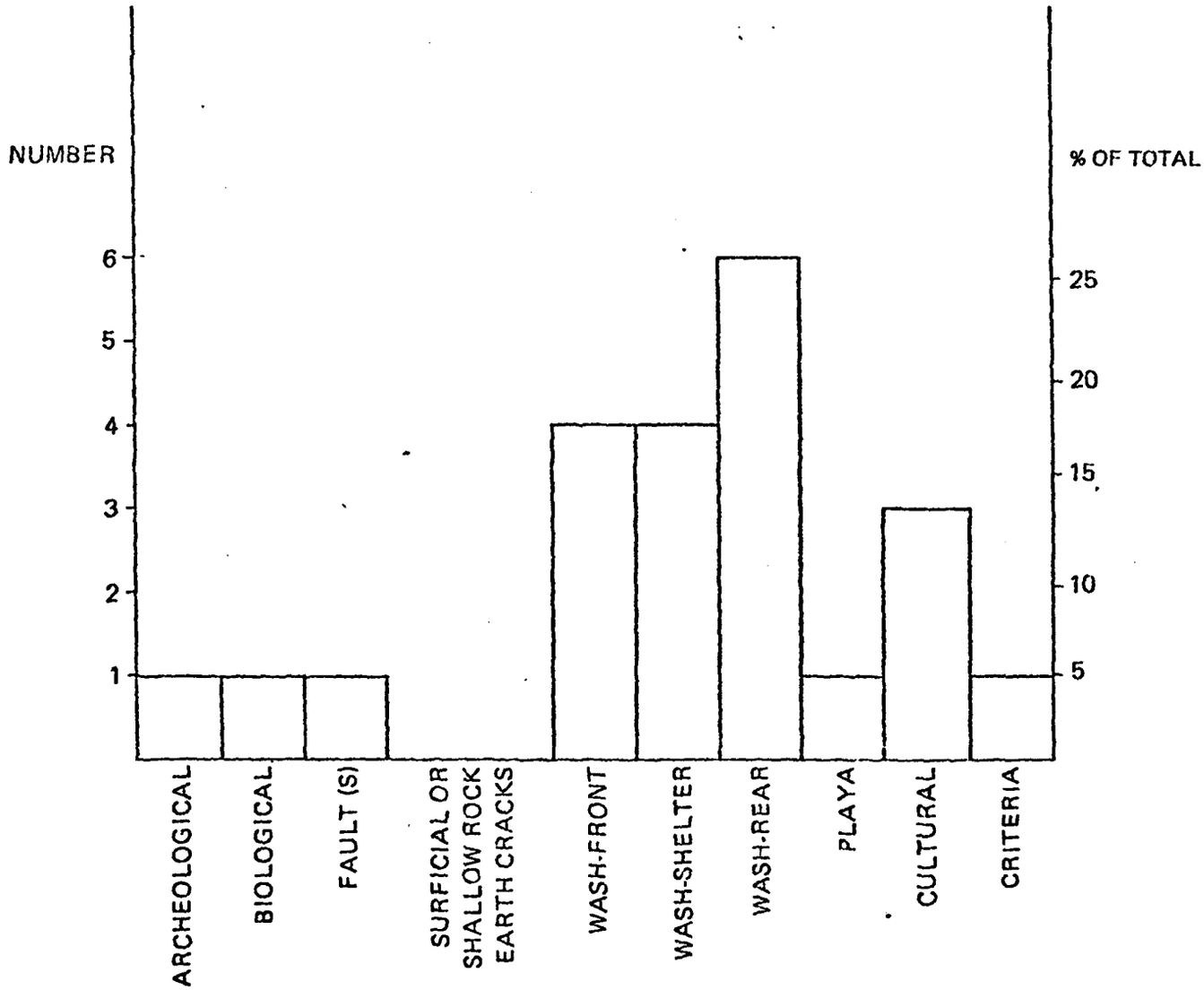


RESULTS OF FIELD SURVEYS
PINE VALLEY, UTAH

FACILITIES SITED

115	SHELTER SITES (HSS)
5	CLUSTER MAINTENANCE FACILITIES(CMF)
4	REMOTE SURVEILLANCE SITES (RSS) (NOT APPLICABLE AFTER 12 MARCH 1981)

APPROVED RESITINGS: 22 SHELTERS



DTN

- DESIGNATED TRANSPORTATION NETWORK
- ROAD SYSTEM FOR MOVING THE MISSILES BETWEEN THE MAIN O.B. AND THE DEPLOYMENT AREA

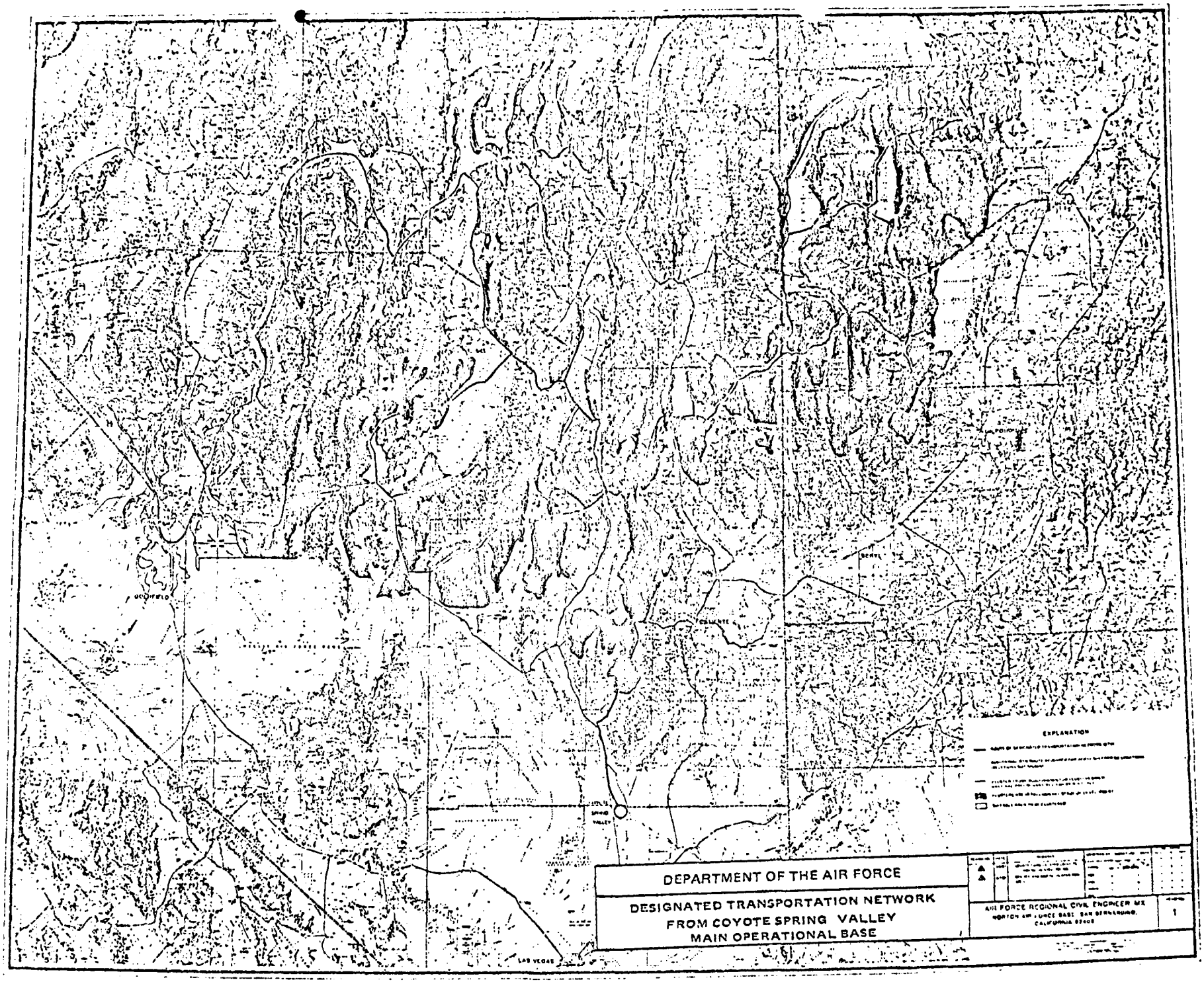
FACTORS INFLUENCING DTN ROUTE SELECTION

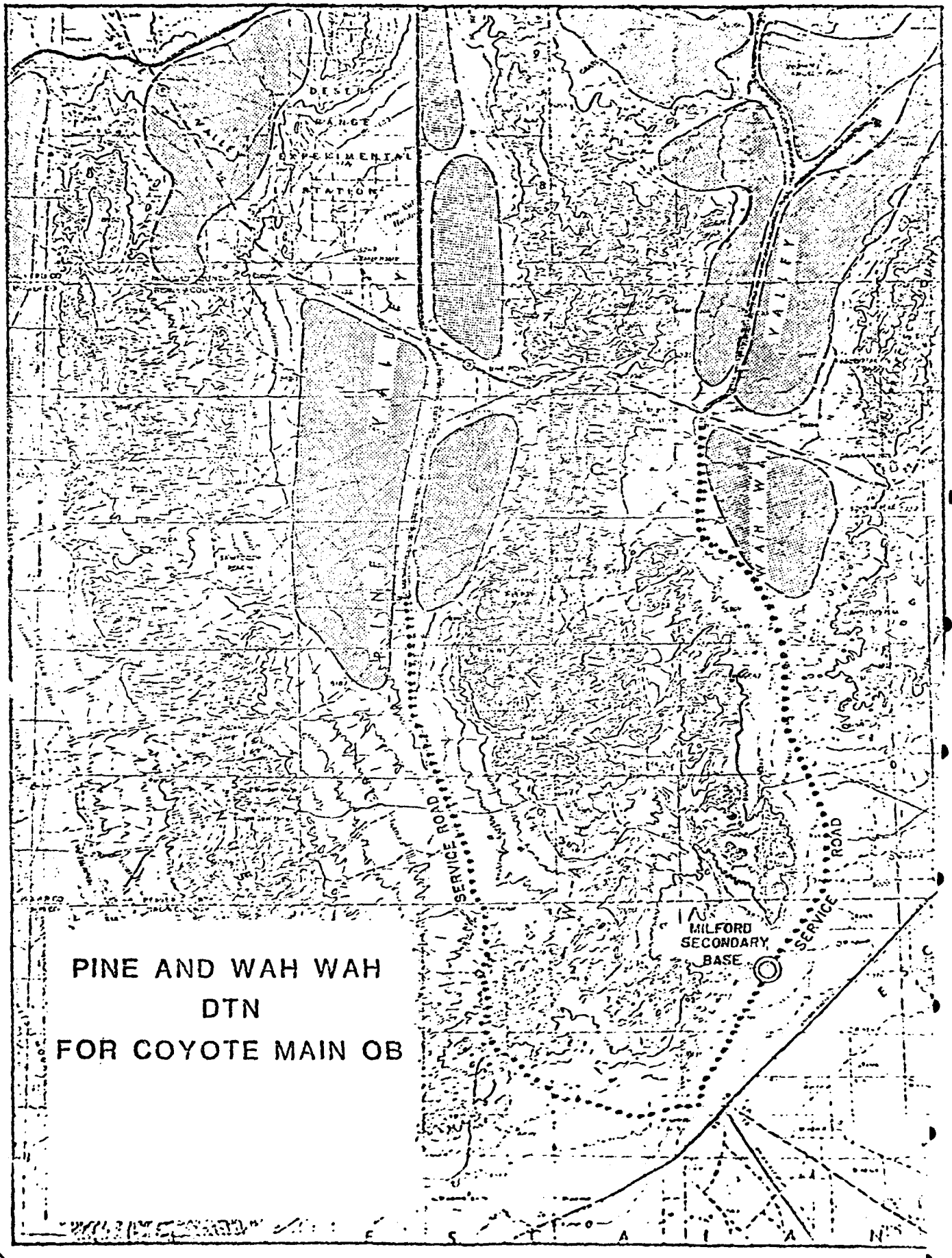
- MOUNTAIN PASSES (INTER-VALLEY ROADS)
  Grade, constructibility, distance

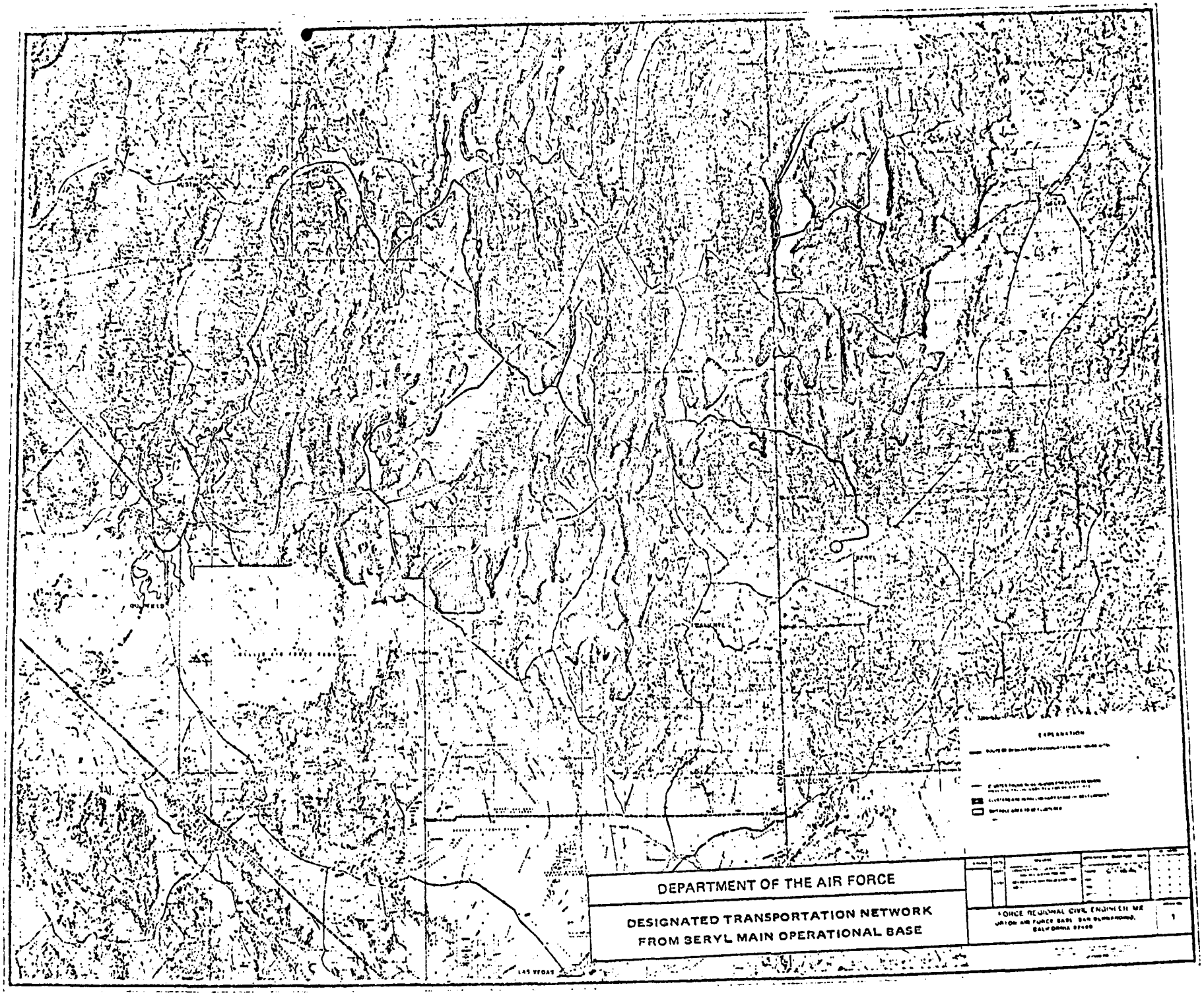
- LOCATION AND ORIENTATION OF CLUSTERS

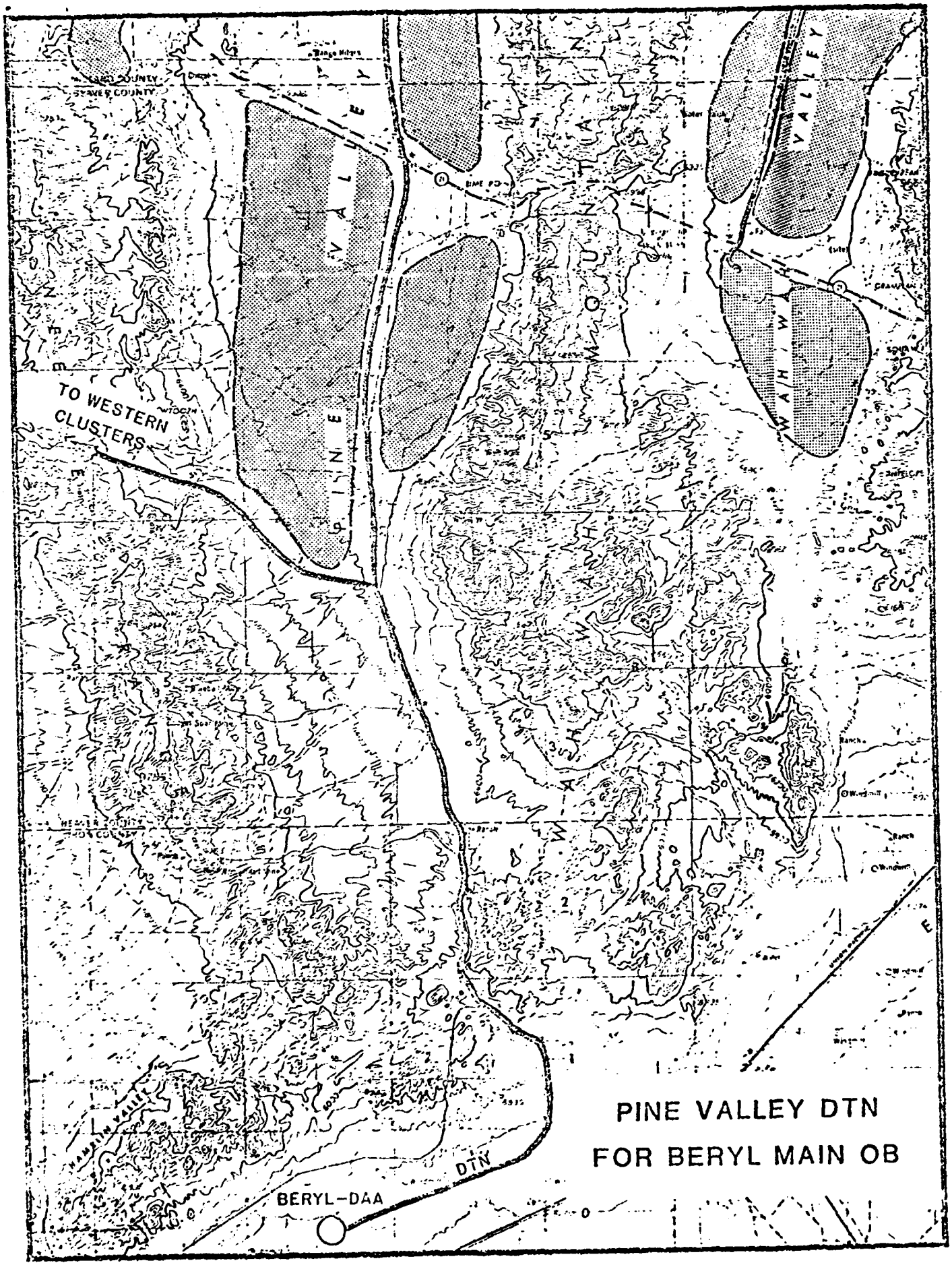
- GEOTECHNICAL CONDITIONS
  Playas, drainages, adverse terrain

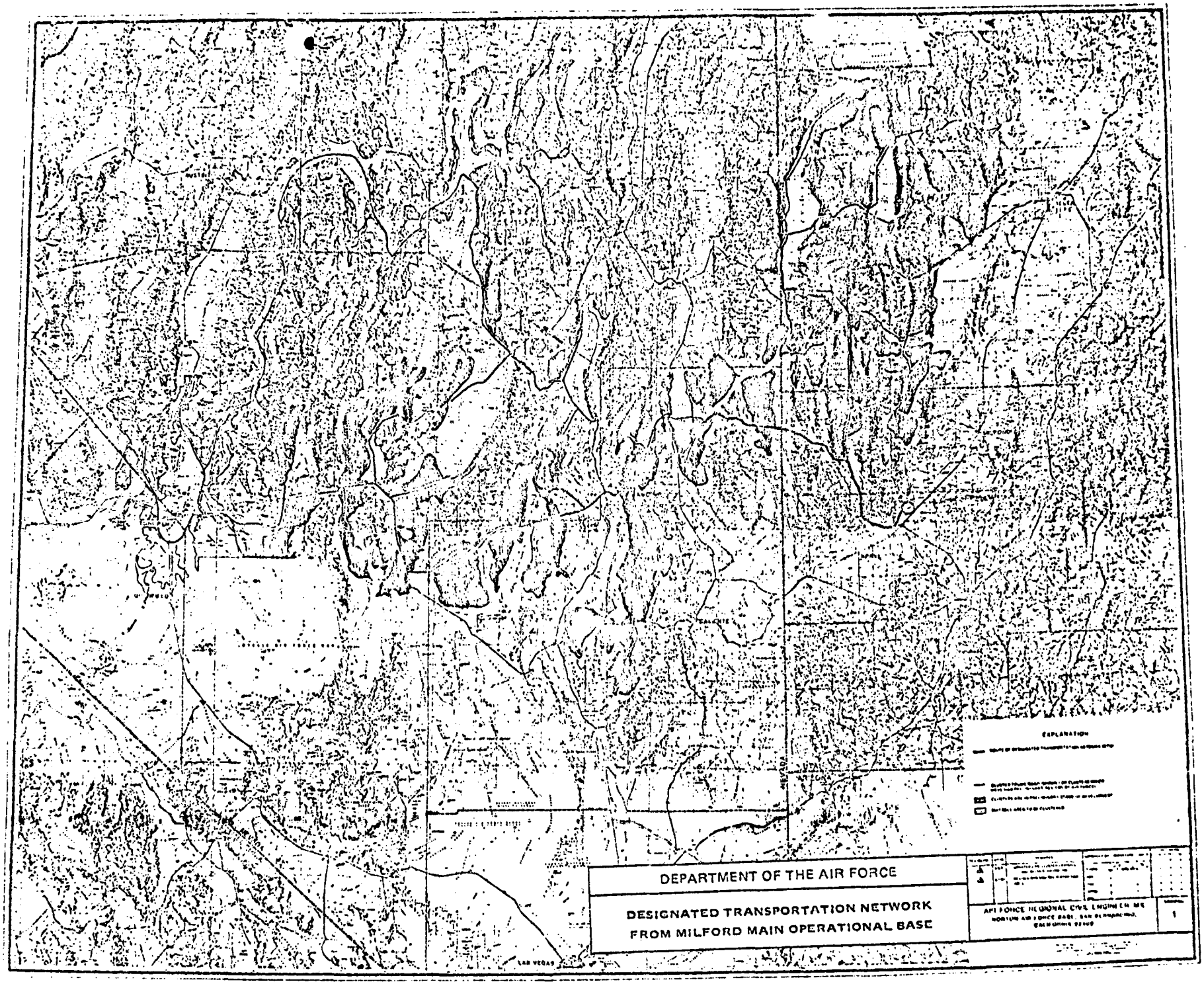
- CULTURAL / ENVIRONMENTAL
  Existing roads, structures, land use
  Environmentally sensitive areas
  EIS exclusions

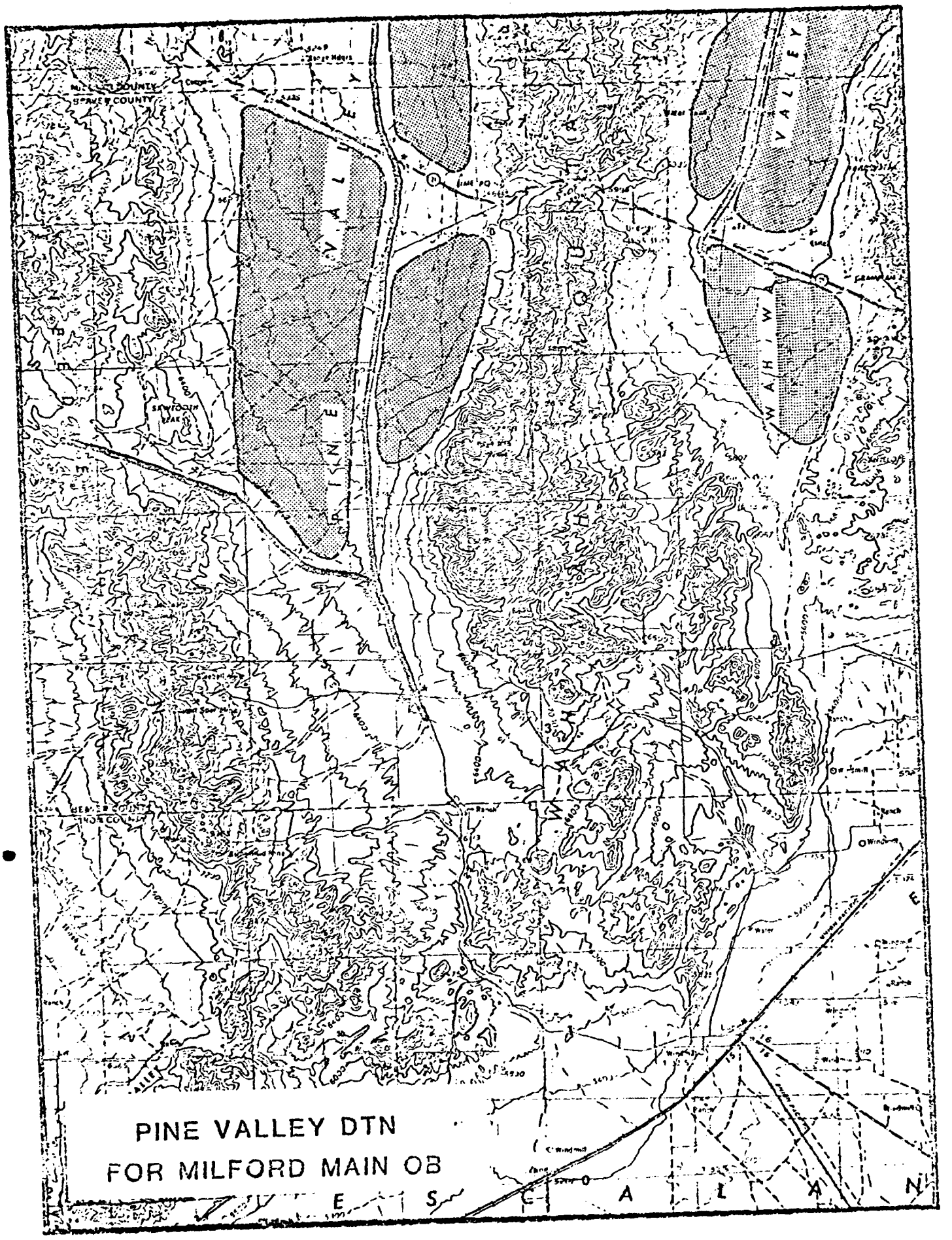

EXPLANATION
DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM COYOTE SPRING VALLEY
MAIN OPERATIONAL BASE
AIR FORCE REGIONAL CIVIL ENGINEER MX
NORTON AIR FORCE BASE, SAN BERNARDINO,
CALIFORNIA 92409
1


DESERT
RANGE
EXPERIMENTAL
STATION
WAH WAH
VALLEY
SERVICE ROAD
SERVICE ROAD
MILFORD
SECONDARY
BASE
PINE AND WAH WAH
DTN
FOR COYOTE MAIN OB


DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM BERYL MAIN OPERATIONAL BASE

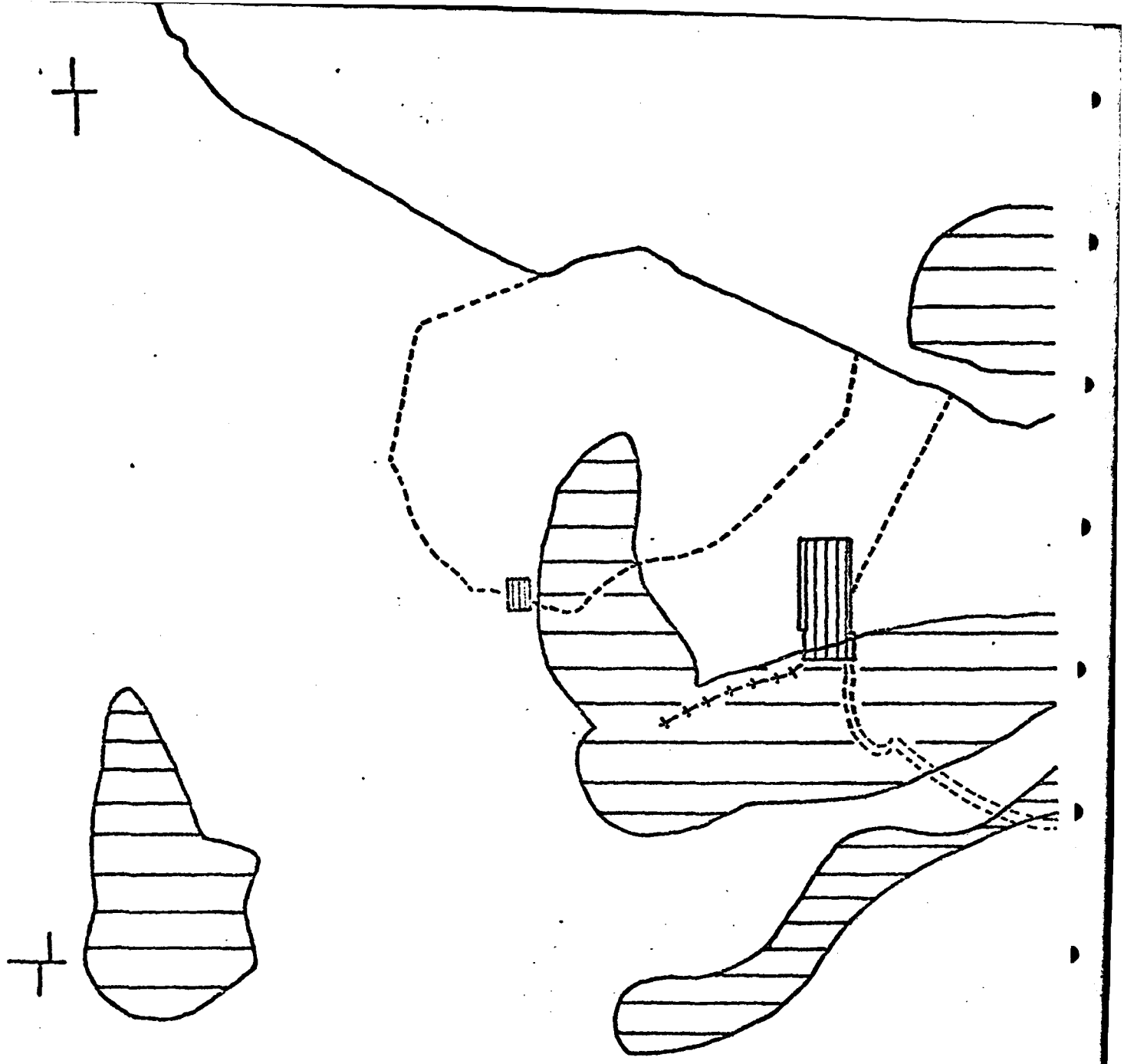

TO WESTERN CLUSTERS
PINE VALLEY DTN
FOR BERYL MAIN OB
BERYL-DAA
DTN


EXPLANATION
DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM MILFORD MAIN OPERATIONAL BASE


PINE VALLEY DTN
FOR MILFORD MAIN OB

DTN OPTIONS MILFORD OB

DTN OPTIONS (TULE ASC)	PRIMARY DTN CONSTRUCTION MILES	OPERATIONS MILES (CLUSTER MILES)	OTHER FACTORS				REMARKS
			MINING	CONSTRUCTION	BIOLOGICAL	COST PRELIMINARY ESTIMATION	
1A-PINE VALLEY	50	7900	LOW IMPACT	——	MODERATE IMPACT	$ 8.2 MIL.	MUST SELECT ROUTE FOR PRAIRIE DOG COMPATIBILITY
1C-WAH WAH VALLEY	62	10,200	HIGH IMPACT	CUT AND FILL FOR WAH WAH SUMMIT	LOW TO MODERATE IMPACT	$ 20.3 MIL.	WAH-WAH SUMMIT CO-EXISTENCE ISSUES AND GRADE PROBLEMS MUST BE RESOLVED
1D-JOCKEY ROAD PINE VALLEY	46	7100	MODERATE IMPACT	CUT AND FILL FOR JOCKEY ROAD	MODERATE IMPACT	——	MUST SELECT ROUTE FOR PRAIRIE DOG COMPATIBILITY



EXPLANATION

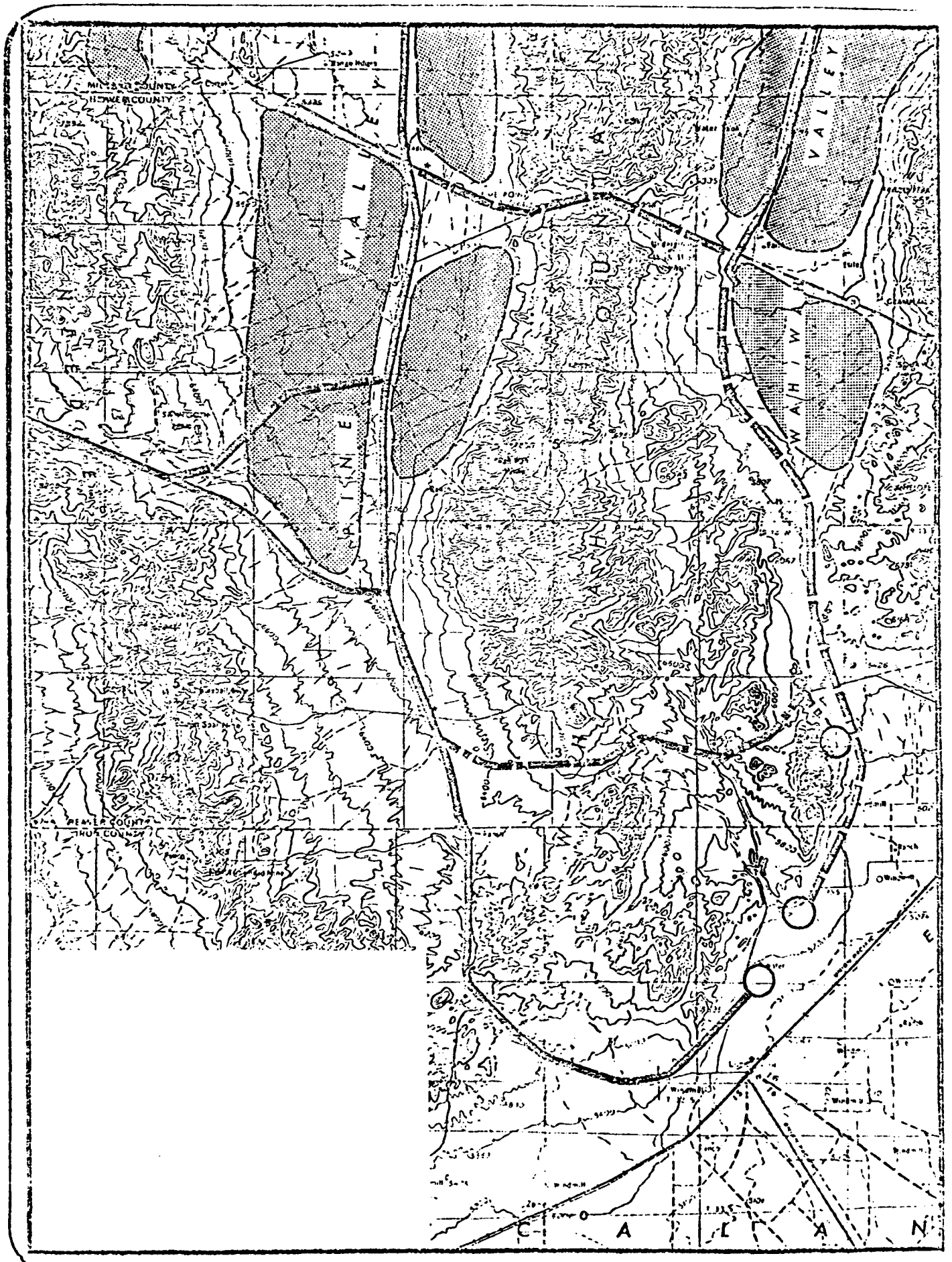
PROPOSED MINE SITES

PROPOSED MINE ROADS

PROPOSED MINE CONVEYOR AND ROAD

PROPOSED MINE ROAD AND RAILROAD

HIGH POTENTIAL MINERAL AREA


MINERAL COUNTY
LYON COUNTY
PEARL COUNTY
NYE COUNTY
CLARK
VALLEY
VALLEY
VALLEY



ENVIRONMENTAL SCIENCES

MARTIN MARIETTA

PAULA MAKAR

23 APRIL 1981

UTAH PRAIRIE DOG

ENDANGERED STATUS

TRANSPLANTED COLONIES

MITIGATION OPTIONS

- AVOID COLONIES
- RETRANSPLANT COLONIES
- REVEGETATE WITH PREFERRED SPECIES
- CONTROL FIREARMS

SAGE GROUSE

DEPENDENT UPON SAGEBRUSH

MITIGATION OPTIONS

- AVOID STRUTTING GROUNDS WHERE POSSIBLE
  - STAND OFF DISTANCE
  - MAP QUALITY NESTING HABITAT
- REVEGETATE WITH PREFERRED SPECIES
- CONSTRUCTION TIMING
- CONTROL FIRE ARMS

SITE SPECIFIC DATA REQUIRED

RAPTORS

ENDANGERED SPECIES

- BALD EAGLE
- PEREGRINE FALCON

MITIGATION OPTIONS

- AVOID NESTING ZONE
- AVOID ROOSTING AREAS
- PROHIBIT ORGANOCHLORIDE CHEMICALS
- CONSTRUCTION TIMING
- PRESERVATION OF PREY BASE
- CONTROL OF FIREARMS
- CONFIGURATION OF POWERLINES

SITE SPECIFIC DATA REQUIRED

RARE PLANTS

THREATENED AND ENDANGERED STATUS

SELECTIVE HABITAT REQUIREMENTS

MITIGATION OPTIONS

- AVOID HIGH CONCENTRATIONS
- TRANSPLANTATION IF POSSIBLE
- COLLECTION OF SEED
- PRESERVATION OF HERBARIUM SPECIMENS

SITE SPECIFIC DATA REQUIRED

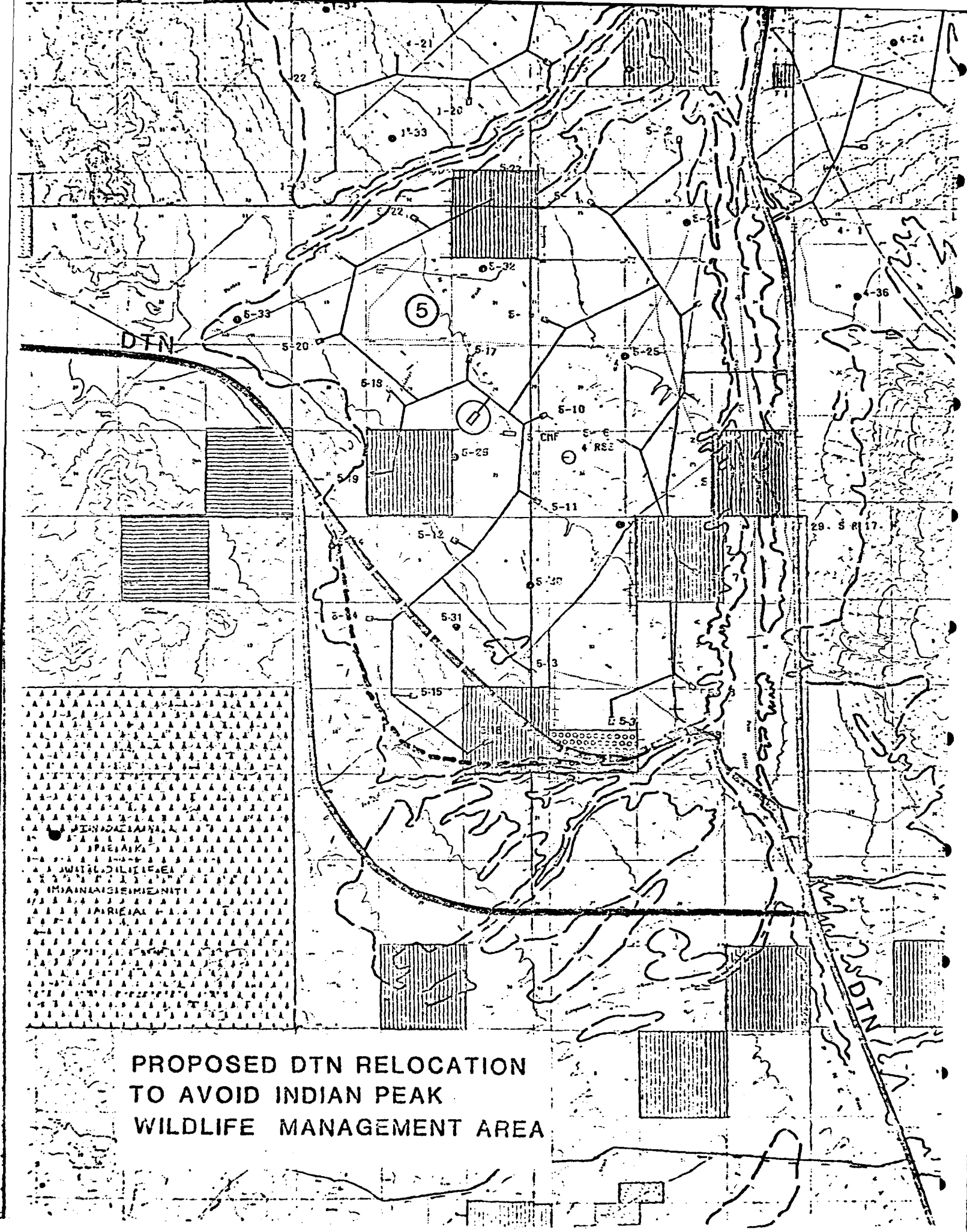
INDIAN PEAKS WILDLIFE MANAGEMENT AREA

UNIQUE RESOURCE

DEER AND ELK MIGRATION

MITIGATION OPTIONS

- AVOID AREA
- PROVIDE BUFFER ZONE
- CONTROL FIREARMS



PROPOSED DTN RELOCATION
TO AVOID INDIAN PEAK
WILDLIFE MANAGEMENT AREA

MITIGATION–REDUCTION OF IMPACT

AVOIDANCE

- NATURAL RESOURCE AREAS (E. G.)
  - WILDERNESS AREAS
  - FORESTS, PARKS, MONUMENTS
  - HIGH POTENTIAL ECONOMIC RESOURCE AREAS
- CULTURAL RESOURCE AREAS (E. G.)
  - INDIAN RESERVATIONS
  - NATIVE AMERICAN SACRED SITES
  - ARCHAEOLOGICAL SITES

OTHER MITIGATIONS ARE SITE SPECIFIC

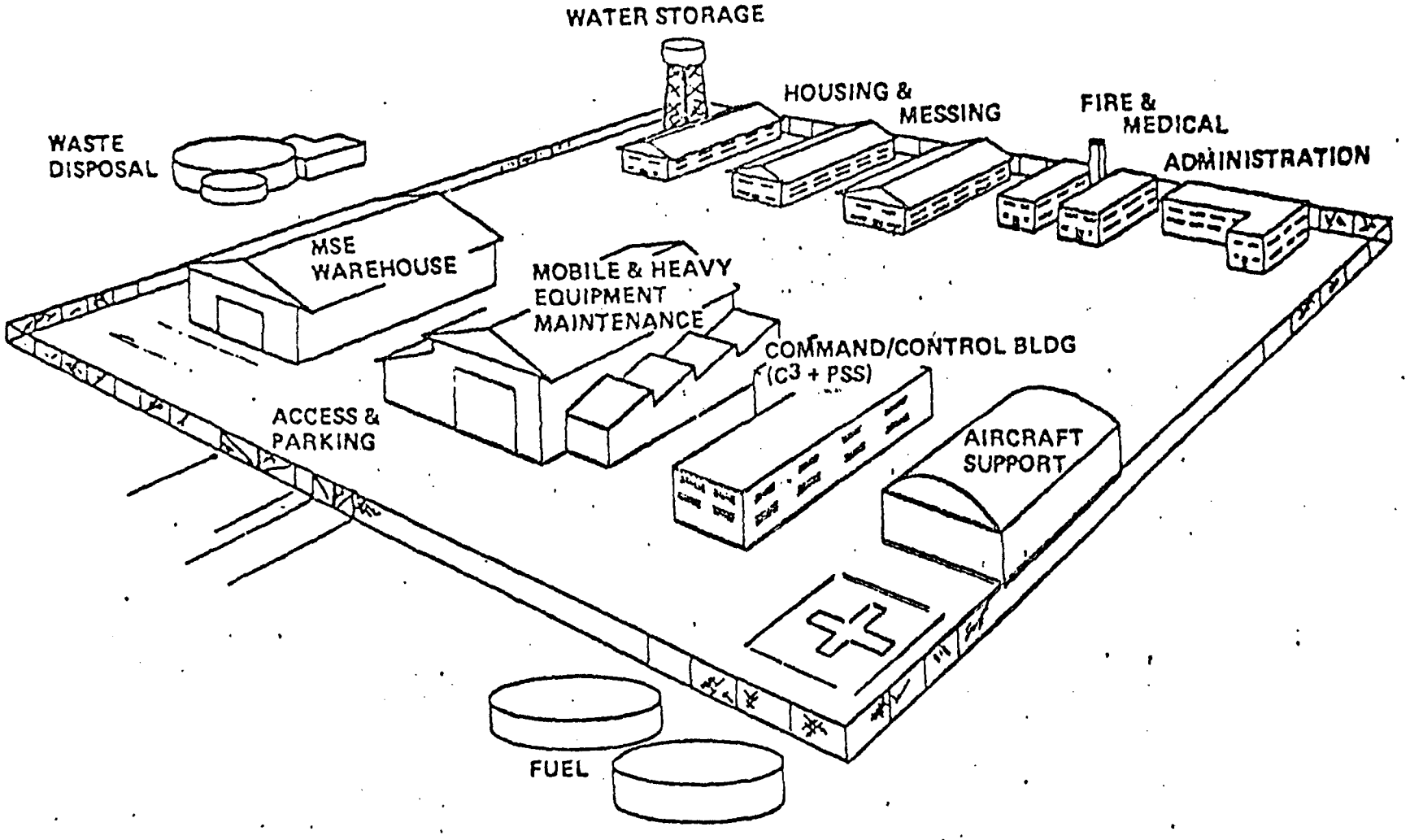
SUMMARY OF PINE
VS
WAH WAH OPTIONS

- CONSTRUCTION AND OPERATING COST FAVOR A PINE VALLEY OPTION
- BIOLOGICAL VS ECONOMIC RESOURCE TRADE-OFF —— REQUIRES MORE DATA
- ENVIRONMENTAL IMPACT APPEARS MANAGEABLE THRU MITIGATION MEASURES
- FINAL OB SITE REQUIRED

AREA SUPPORT CENTER (ASC)

- FUNCTIONS
  - SECURITY
  - MAINTENANCE
- FACILITIES
  - VEHICLES
  - HELICOPTERS
  - EQUIPMENT MAINTENANCE
  - STORAGE - PARTS AND EQUIPMENT
  - ACCOMODATIONS

ASC CONCEPT


WATER STORAGE
HOUSING &
MESSING
FIRE &
MEDICAL
ADMINISTRATION
WASTE
DISPOSAL
MSE
WAREHOUSE
MOBILE & HEAVY
EQUIPMENT
MAINTENANCE
COMMAND/CONTROL BLDG
(C3 + PSS)
ACCESS &
PARKING
AIRCRAFT
SUPPORT
FUEL

AREA SUPPORT CENTER (ASC)
SITE SELECTION CRITERIA

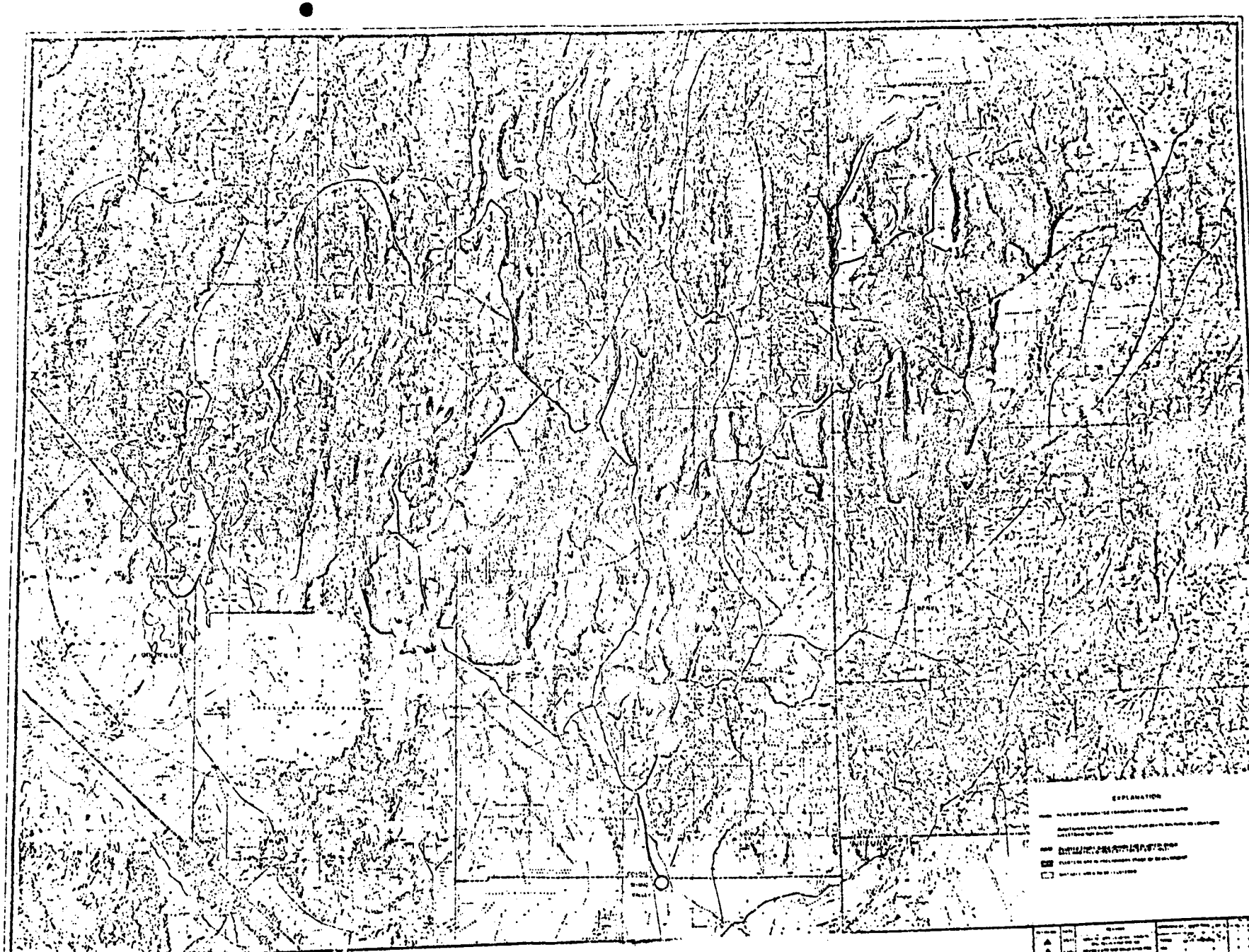
- SITE SUFFICIENT ASC'S TO SUPPORT A 200 CLUSTER SYSTEM WITH ABILITY TO ACCOMODATE CLUSTERS PRESENTLY OUTSIDE LIMITS OF EXISTING REGIONAL LAYOUT

- EACH ASC TO SUPPORT MAXIMUM NUMBER OF CLUSTERS WITHIN A 65 STATUTE MILE RADIUS

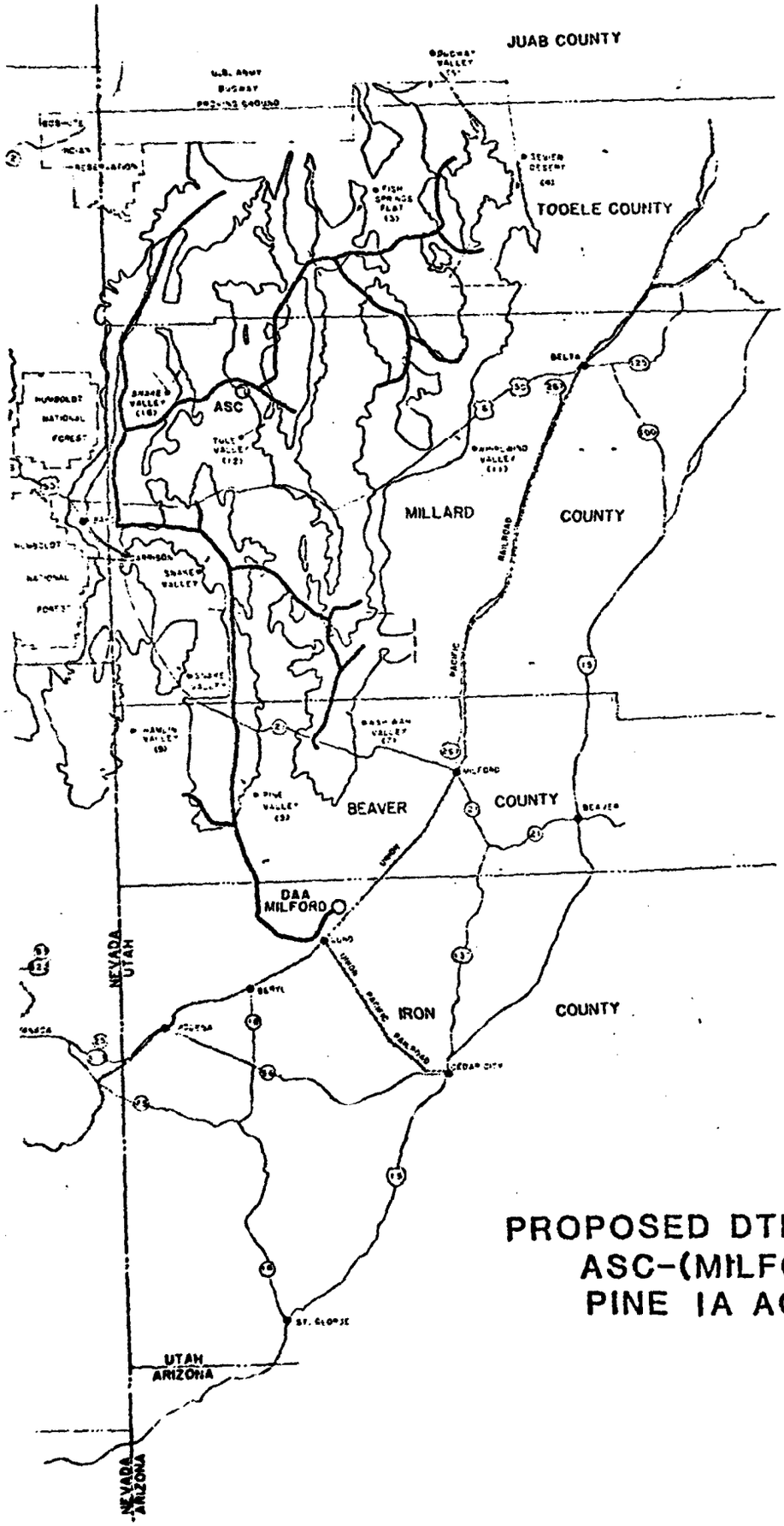
- LOCATE ASC'S ALONG THE DESIGNATED TRANSPORTATION NETWORK (DTN)

- LOCATE ASC'S IN CLOSE PROXIMITY TO MAJOR HIGHWAYS AND OB OR LOCAL COMMUNITIES

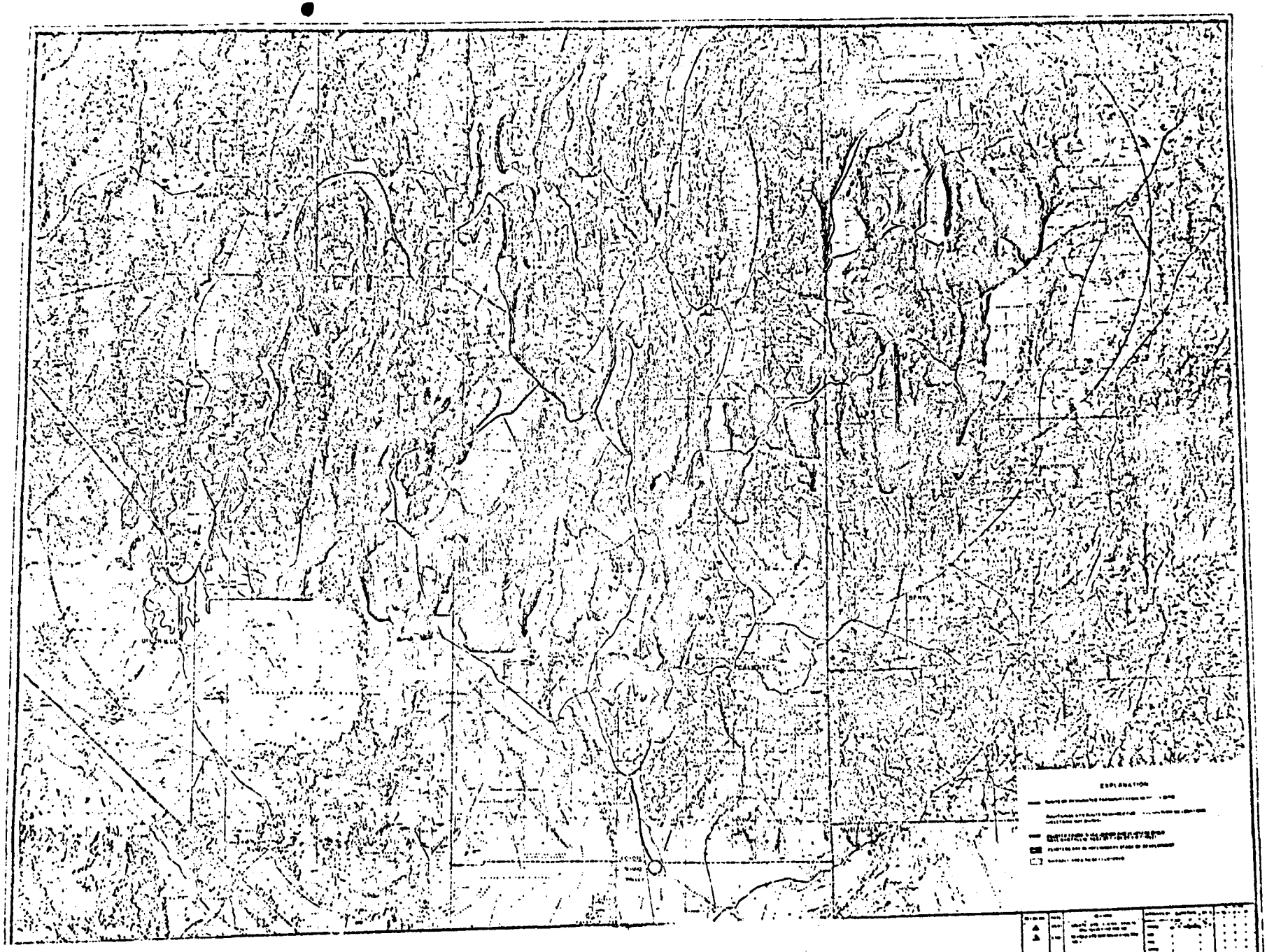
- LOCATE ASC'S IN "SUITABLE" TERRAIN BUT WITHOUT LOSS OF SHELTER SITES



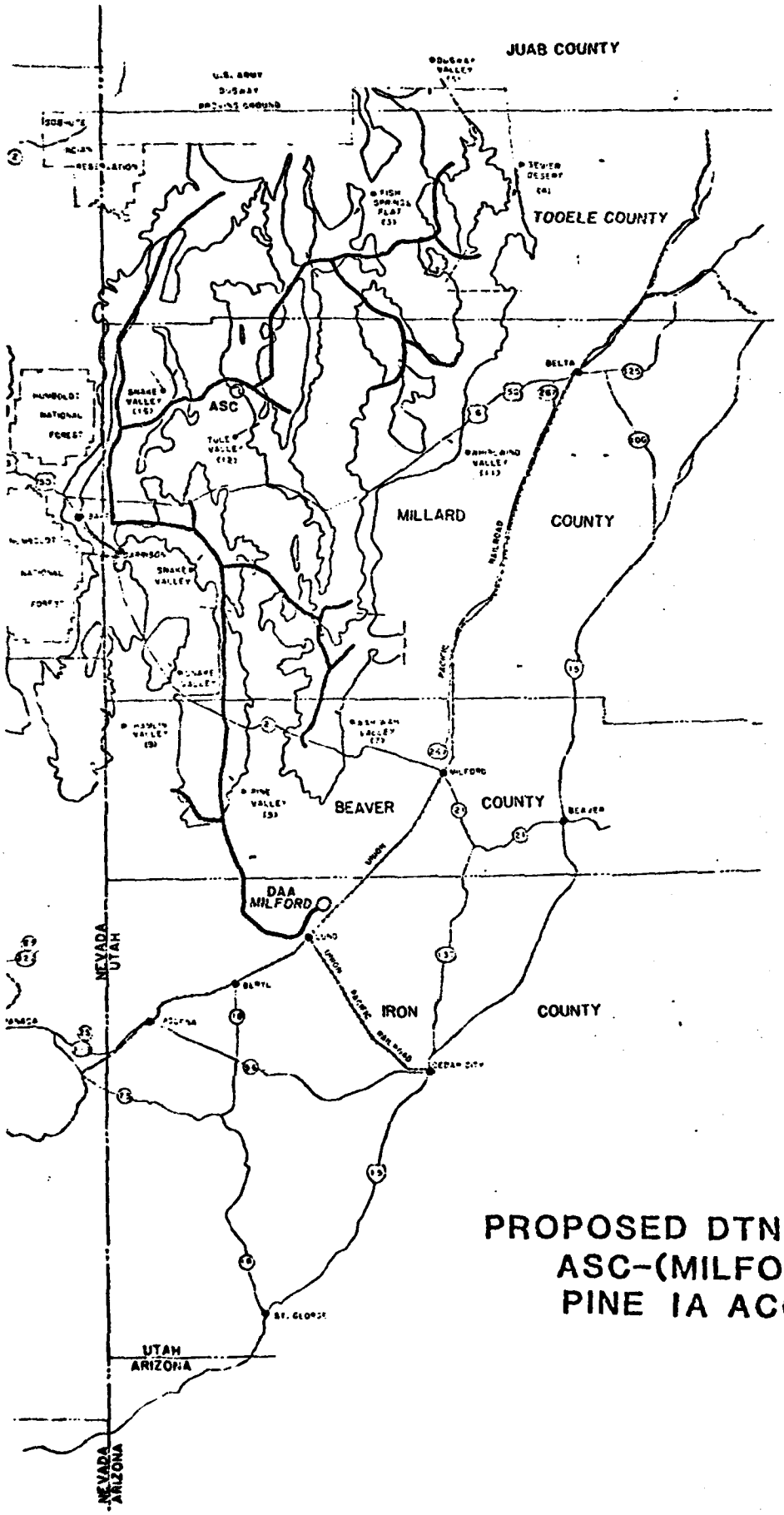
AREA SUPPORT CENTER LOCATIONS



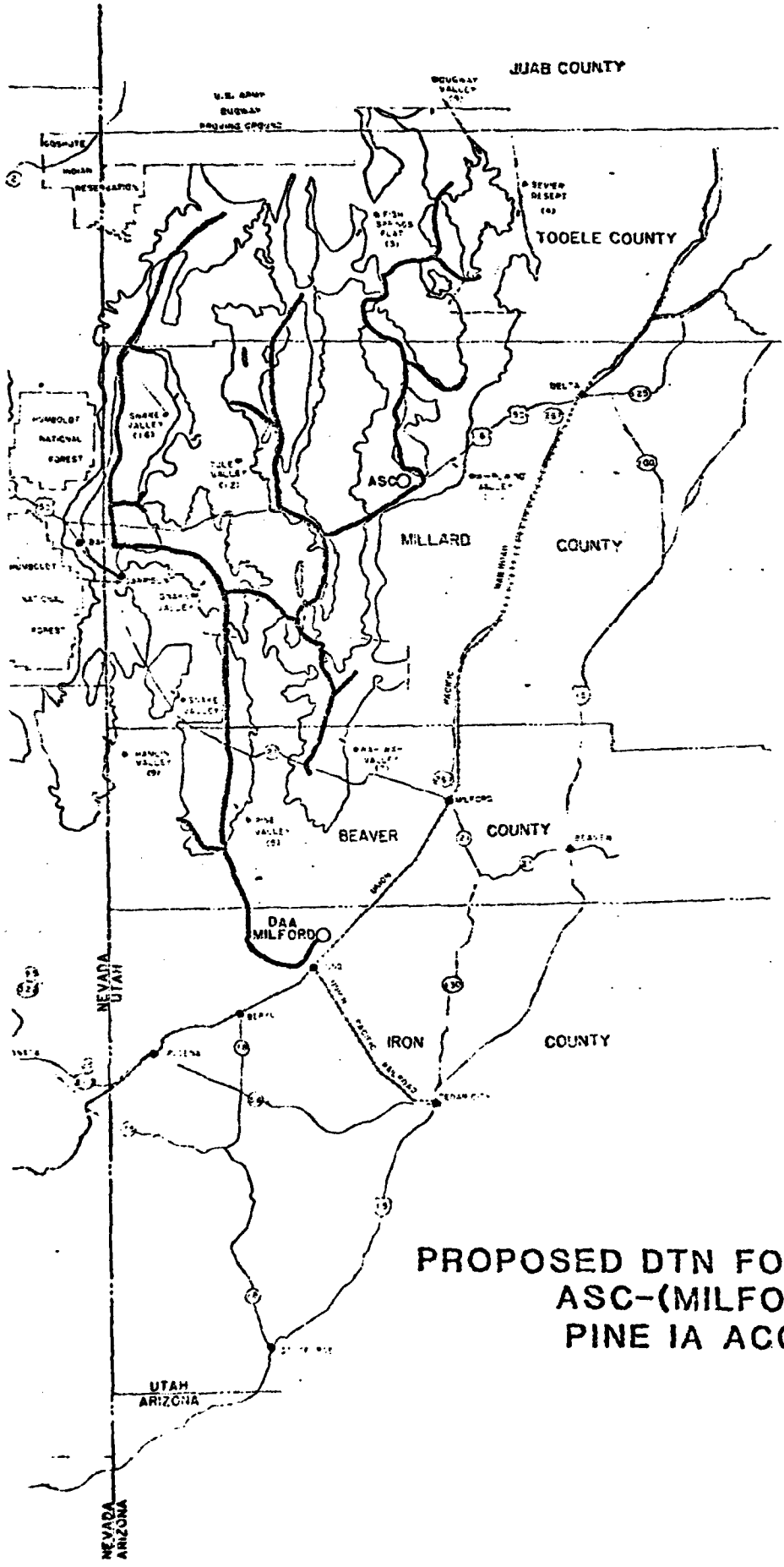
PROPOSED DTN FOR TULE
ASC-(MILFORD OB,
PINE IA ACCESS)



AREA SUPPORT CENTER LOCATIONS



PROPOSED DTN FOR TULE ASC-(MILFORD OB, PINE IA ACCESS)



PROPOSED DTN FOR WHIRLWIND
ASC-(MILFORD OB,
PINE IA ACCESS)

TULE ASC

+ CENTRALLY LOCATED

+ CONSTRUCTION CAMP AT ASC VICINITY ZONE

+ CONSTRUCTION MILEAGE FAVORS TULE

+ EXCELLENT CLUSTER ACCESS

– DISTANCE FROM SUPPORT COMMUNITY

WHIRLWIND ASC

+ ALONG A MAIN HIGHWAY

+ CLOSE TO DELTA

– POOR CLUSTER ACCESS

? COEXISTENCE OF DTN WITH STATE HIGHWAY

ASC SUMMARY

- PRELIMINARY SITING FAVORS A TULE ASC

- NEED ADDITIONAL DATA / FURTHER STUDY
  - COEXISTANCE OF ROADS
  - PROXIMITY TO DELTA
  - ENVIRONMENTAL FACTORS
  - COMPLETION OF CLUSTERING
  - OB SELECTION

TIMETABLE FOR SUBMITTAL OF CLUSTER LAYOUTS UTAH VALLEYS

(AS OF APRIL 21, 1981).

WAH-WAH	COMPLETED
FISH SPRINGS FLAT	4-30-81
PINE	COMPLETED
WHIRLWIND	4-28-81
SNAKE	4-28-81
TULE	4-28-81
DUGWAY	5-1-81
SEVIER DESERT	5-1-81
SEVIER LAKE	5-15-81

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Parties

FROM: Utah MX Coordination Office

DATE: June 9, 1981

SUBJECT: Air Force Meetings on Ranching and MX Weapon System Siting

On May 15, 1981 two meetings were held in the Milford High School Auditorium in Milford, Utah. The first meeting was an informal discussion with ranchers and the second meeting dealt with siting of the MX weapon system. There was no written agenda for the first meeting; the agenda for the second meeting is attached. Attendance lists were not taken for either meeting. Air Force representatives included: Major Mike Elliott of AFRCE-MX/DEVC who coordinates MX weapon system siting; Morgan Wheeler of the Sacramento District Corps of Engineers, who is responsible for real estate acquisition; Dr. Robin Tausch of Henningson, Durham and Richardson (HDR) who is involved with range/ranching studies; Stan Madsen of ERTEC National who is the ERTEC MX Project Director; Dr. Jim Mangi of ERTEC Northwest who coordinates siting resource clearances; Dr. Gayle Thompson of ERTEC Northwest who is responsible for siting cultural resource clearances; and Fred Snider of ERTEC National who is involved with DTN routing. The discussions are summarized below.

Ranching Meeting

This meeting was an informal, open, question-and-answer session held during the morning. Major Elliott began with introductions of the Air Force representatives. He then discussed the status of the MX program, the MX Draft Environmental Impact Statement (DEIS) and the 30,000-or-so comments on it gathered at the public hearings or submitted in writing. The MX DEIS comments are currently being catalogued and incorporated into the MX FEIS. Presidential decisions on the basing mode and deployment area (the main operating base site and the Initial Operating Capability (IOC) valleys) will be made in the late Summer. Subsequently a land withdrawal application will be submitted in the Fall to the Bureau of Land Management (BLM) and the states; it will identify the parcels of land to be withdrawn. The BLM will review the land withdrawal application in about four to six months, and will then submit a departmental recommendation (along with the review and the application) to the Subcommittee on Public Lands. Construction will not begin before the Spring of 1983 (i.e., until Congress approves the application and withdraws the land) and would be at the selected main operating base site.

Then a general discussion of ranching impacts began. The MX DEIS estimated that there would be a one percent loss of animal unit months (AUMs) after construction, but there would be a considerably greater AUM loss during construction due to range disturbance, road kills and the like. Robin Tausch indicated that the range and ranching analysis is being done on an allotment-by-allotment basis using range disturbance estimates of 100-foot roadway widths and ten acres per shelter. Under these assumptions, the range losses are approximately 40 acres per allotment. He indicated that individual operators were not visited to verify the data, assumptions or methodology used in this analysis. Robin Tausch also discussed the worst case analysis HDR has conducted, which assumes range disturbance within one half mile of all facilities. For example, in Pine Valley a 29 percent range loss was estimated due to construction only. The deployment area valleys were ranked according to severity of range impacts and of the top six, four were in Utah (and included Pine and Wah Wah Valleys), and two were in Nevada. The worst case analysis included the cluster roads (unpaved) and the designated transportation network (paved DTN). Estimates of revegetation time requirements and success rates are not certain.

The question-and-answer session then opened. It was stated that it would take approximately eight to ten years to revegetate after construction or disturbance occurred, assuming effective exclusion of livestock from disturbed areas (by fencing or other means). The effectiveness of revegetation measures cannot be fully assessed. Morgan Wheeler said that the burden of livestock restraint will be on the contractors and not the ranchers; based on Corps experience with other construction projects, cattle and sheep can coexist with construction activities.

Clair Accord mentioned that the Air Force needs to consider (but has not, so far) the socio-economic impacts of deployment, particularly with regard to agricultural labor availability and wage rates. It is conceivable that the project will bid away both hired hands and the rancher operators. The Corps of Engineers said that they can compensate ranchers for increases in operating costs.

John Wintch said the one percent loss of AUMs after construction is unrealistic. The secondary impacts of MX deployment could and probably would result in uneconomic ranch operations. Morgan Wheeler said that the one percent range loss is only a measure of direct construction impacts. John Wintch suggested that ranchers be given the option of being bought out. The Corps of Engineers could only do this if the land withdrawal legislation gives them enough latitude to compensate large secondary impacts -- in the past, the Corps of Engineers has been unable to provide any measurable compensation for secondary impacts or losses.

Randy Parker said that the one percent direct AUM loss could quite easily be a ranch operator's profit margin. If this is so, the operation would be uneconomic. HDR and the Corps of Engineers concurred with these statements.

A rancher questioned what the policy is with regard to water pipelines. The Corps of Engineers said that they need to know the location of all existing water pipelines and as much as possible about proposed ones. At this stage, it is relatively easy to make appropriate design allowances for pipelines at little cost. After construction, the Air Force will decide who will pay for the modification/installation, but based on past experience with other large construction projects, the ranch operator will probably have to bear the expense.

Another rancher asked what the policy would be with regard to roads crossing fences. Morgan Wheeler answered that cattle guards would probably be used. This raised a question about the ability of cattle guards to support the missile transport vehicles. Both the Corps of Engineers and the Air Force indicated that they did not think this would be a problem.

A rancher wanted to know who would determine calf/lamb losses and compensation for the estimated losses. The Corps of Engineers will negotiate both losses and compensation with the individual ranchers. Losses will be determined using the historical experiences of the rancher(s) in question, as well as other ranchers in the vicinity.

John Wintch asked what measures are actively being investigated to mitigate AUM loss. Dr. Robin Tausch indicated that HDR is looking into mitigation but that nothing much is being done. HDR is open to suggestions from the ranchers.

A rancher mentioned that range disturbance would enhance infestation of the area by noxious weeds or exotic plants. HDR recognizes the problem, but does not have an answer.

A miner then discussed his experiences with missile construction in North Dakota, Montana and Hawaii. He said that a one percent AUM loss after construction is accurate, presuming revegetation is successful. In his experience, the federal government took care of the people who had to put up with construction. Dr. Robin Tausch said that the Great Basin is ecologically sensitive, and not comparable to these other areas. The Corps of Engineers has done work in Montana, and there were impacts and problems there. Every construction project has to stand on its own merits. Morgan Wheeler reiterated that the one percent AUM loss is a direct construction loss only; indirect losses would include increased operating costs, road kills, etc.

Another rancher said there should be an up-front commitment to revegetation before construction begins. The one percent AUM loss represents about 60,000 AUMs across 160,000 acres.

Mike Elliott said that defining or estimating impacts is not enough; mitigation must be looked at as well. He asked the ranchers for their ideas on how to equitably mitigate impacts.

Dr. Robin Tausch indicated that the latest ranching/range analysis to be undertaken by HDR focuses on individual operators and will be a large study. The Air Force indicated that General McCarthy has explicitly stated that there will be no net AUM loss; the Corps of Engineers qualified this by asking everyone to note that the Air Force (and not the Corps) had made the statement.

A miner stated that the reclamation done at Colestrip, Montana has made the area better than it was before strip mining was begun.

Clair Accord stated that it was imperative for ranchers to begin collecting the appropriate financial/operations data now. The ranchers need to build a history that describes, on an annual basis: yields per acre, lambing/calving rates and losses, theft and vandalism losses, ranch improvements by type and cost, etc.

Income tax returns, as well as other records, should be used. The Corps of Engineers emphasized that the ranchers need to keep track of such things as gates being left open, off-road vehicle traffic, etc., as well.

A rancher asked how theft and vandalism losses would be compensated. Morgan Wheeler answered that legally, inconsequential damages could not be compensated unless Congress directed that they be. Compensation would be worked out on a rancher-by-rancher basis, assuming Congress authorized such compensation. Major Elliott said that there will not be compensation for unforeseen losses. Therefore, it is imperative that the ranchers have demonstrable losses based on their records. The Corps of Engineers can only compensate for what they are legally mandated to do. Another rancher mentioned impact monies, which Morgan Wheeler said Congress would appropriate to affected counties and communities.

One of the miners asked if the session could focus on some questions and answers regarding mining activities. Major Elliott mentioned that the April 23rd meeting in Salt Lake City was held to discuss the environmental and cultural impacts of weapon system siting. He also mentioned a $55,000 proposal to study and map a sage grouse lek in Pine Valley. However, he was here today to talk with ranchers and miners.

ERTEC conducted a mineral survey of the Great Basin Desert. The Air Force then adopted a policy of avoiding high potential mineral areas in siting the weapon system. The Air Force realizes that there will be impacts to mining operations during construction, but after construction, the MX weapon system and mining will be compatible.

A miner asked about economic impacts to existing operation and compensation. Morgan Wheeler said that oil and gas leases will be subordinated where MX facilities are located. However, individual or specific compensation cannot be estimated because facility sites are not final; nevertheless, lessors will be compensated. The Corps of Engineers will appraise the value of the mineral estate to compensate minerals claimants. Also, the Corps of Engineers said that grazing compensation will be for perpetuity.

Randy Parker asked why the salt flats were not considered as a suitable area for deploying the MX. A miner conjectured that the high heat would be a problem. Major Elliott said that this was probably not the case, but was not sure why the area was not under active consideration.

A rancher asked about the widths of the DTN and cluster roads. The Air Force indicated the widths would be between 12 and 24 feet. The Air Force will attempt to control off-road vehicle access, realizing that this will conflict with the open access policy of the Air Force.

Another rancher raised a question about valley use. Major Elliott said that construction activities will be phased so that construction will not be going on in all valleys simultaneously.

A rancher asked what the timetable was for construction in Beaver County. The Air Force said that if the Milford site was chosen for the main operating base (MOB), construction would begin in the Spring of 1982 at the Milford site for the MOB, and in 1983 in Wah Wah Valley and 1984 in Pine Valley for the weapon system.

Another rancher asked about reducing the overall size of the weapon system. Major Elliott mentioned that valley clustering is one of the options for reducing the size of the deployment area that is under consideration. This would enable the Air Force to use odd-sized parcels of land (e.g., that could site 13 instead of 23 shelters). The cluster roads would be directly connected to the shelters and there would be no barriers between clusters but there would be between valleys. The missiles in a valley could be shuffled among any of the shelters (e.g., 10 missiles could be shuffled among 230 shelters, as opposed to one missile being shuffled among only 23 shelters).

Vern Wood asked about the Air Force's criterion of 50 feet to bedrock. The Air Force rationale for this criterion are: 1) shelter hardness, and 2) ease of construction. However, the Air Force said they would re-examine the outline of 50 feet to bedrock for Pine and Wah Wah Valleys. Stan Madsen said the 50-foot rock-line contour for 10,000 square miles was a best professional judgment based on five to seven borings drilled in every valley, seismic lines and geologic maps which were constrained by the field investigation contract dollars available. If more field work is conducted, the contour can be refined. However, in Pine Valley for example, the western edge of the valley is bounded by volcanic rock and the eastern side has adverse terrain or slopes greater than 10 to 15 percent.

Siting Meeting

Major Elliott introduced the Air Force representatives (the same as for the ranching meeting). He opened with a cartoon, and then gave an MX system description. He discussed the MX decision process: the Townes Committee who will make a basing mode recommendation to the Secretary of Defense, who will make a basing mode recommendation to President Reagan, who will make the basing mode decision about July, and a deployment area decision this Fall. Further, the Air Force is committed to the policy of open access within the deployment area.

The Air Force process of land withdrawal and acquisition was then discussed in detail. The IOC shelter and cluster maintenance facility (CMF) sites will be surveyed on the ground, while the remaining FOC shelters sites and CMFs will be simple, protracted line drawings that will be unsurveyed. The surveyed and protracted maps will be forwarded to the BLM, who will review them and send a report and recommendation to the Secretary of the Interior, who in turn will make a recommendation to the Subcommittee on Public Lands. Congress will withdraw the land through legislation.

Then, the weapon system siting process was discussed. First, within the perimeter of the candidate deployment areas, geotechnically-suitable areas are delineated. Then, using environmental data collected by HDR and other consultants, environmentally sitable areas are defined. Using the geotechnically suitable and environmentally sitable areas, MX weapon system site layouts are drafted at a scale of 1:62500. These draft renderings undergo internal site review and protracted legal descriptions are developed. Detailed site layouts are then drafted at a scale of 1:9600. These drawings are given to the Corps of Engineers for detailed design at the same time that on-the-ground surveying and environmental reviews are being conducted at the sites. These data are analyzed, there is another site review, and if a re-siting occurs, the 1:9600 process repeats itself. After an acceptable 1:9600 site layout is derived from the

iterative process, surveyed legal descriptions are prepared and environmental assessments are prepared. These data will be transmitted to the BLM where they will be reviewed. Presuming everything is in order, the BLM will release the land to the Air Force and Corps of Engineers (the construction agent for the Air Force).

The Siting Review Board was briefly mentioned. The Board will review and make recommendations on the siting or re-siting of specific MX weapon system facilities.

Mike Elliott stated that the Air Force had been working on weapon system siting for the past nine months and that it was finally beginning to fit together. The Air Force felt that they needed to do a better job of getting input from the state, local and private sector.

The purpose of the meeting was to do a complete debriefing of what the Air Force and its contractors have done in Pine and Wah Wah Valleys, Utah. Stan Madsen of ERTEC explained that three valleys have been chosen (Dry Lake Valley, Nevada, and Pine and Wah Wah Valleys, Utah) for the purpose of having ten clusters operational by mid-1986, the IOC date. The Air Force has opted for ten clusters in Dry Lake Valley and five clusters each in Pine and Wah Wah Valleys.

One of the changes to the baseline weapon system is that it has switched to direct connect, which means that the cluster roads will go directly from one shelter to the next. ERTEC said that their report on the IOC weapon system layouts is in draft form, but it will be submitted to the Air Force very soon. Every time the DTN is changed, the shelters have to be modified. Furthermore, there will have to be a 2,500 foot stand-off distance between power lines and any shelter. The initial weapon system layout for Wah Wah Valley had to be changed to regroup a cluster because of a DTN re-routing.

Before the surveyors began their work, a geotechnical and monument survey was done. After this process was completed, surveyors prepared legal descriptions and then reports. Since the question remained whether the clusters were acceptable or not, a field review of the surveyed sites was conducted. If a decision is made to change the site layout(s), then the process would be repeated.

ERTEC stated that approximately 12 acres would be disturbed for each 2.5-acre shelter site. The geotechnical factors affecting the shelter location are depth to rock and water -- depths must be more than 50 feet. The BLM will be reviewing wildlife and botanical voucher collections. The Utah State Archeologist has visited the area. Re-siting will be recommended so as not to disturb isolated artifacts. A question was asked about the criteria used to determine re-siting; ERTEC indicated the re-siting criteria was in their report, which will be released to the Air Force next week.

Biological resources were then discussed. The BLM has given Air Force contractors biological data for the four operating base sites and the IOC valleys. The lists of protected species are subject to change, so the Air Force is taking into consideration all biological resources that may have protected status when the Air Force is actually in construction. The majority of the biological work conducted to date has focused on plants. No re-sitings were recommended. The Air Force stated that they were considering doing additional biological studies in other seasons, especially Spring.

The Air Force said that HDR will be doing the Tier II environmental assessments on the IOC valleys. Further, the Air Force stated that if Nevada and Utah are selected for full basing, the Air Force will use the IOC shelter locations, since most of the sites are good (i.e., geotechnically and environmentally acceptable).

Mike Elliott said that the Tier I environmental impact statement was supposed to address the differences in full or split basing of the weapon system in Texas/New Mexico and Utah/Nevada. The other "tiered" environmental assessments will address vicinity zone impacts and site-specific impacts.

Major Elliott concluded by indicating that the basing mode decision will be made by the President. If full basing in Utah/Nevada is selected, Utah will have a secondary (small) operating base, as preferred in the MX DEIS. The Air Force has retained EDAW, Inc. to do base comprehensive planning at four MOB vicinity zones: Coyote Springs, Nevada; Beryl and Milford, Utah; and Clovis, New Mexico. EDAW is currently in the process of narrowing in on a 10,000 acre site within each vicinity zone to recommend for detailed studies. Within two to four weeks, the Air Force will approve a 10,000 acre site for each vicinity zone.

Major Elliott then discussed Milford vicinity zone in more detail. There are three 10,000 acre sites within the zone: 1) the north Milford site (about ten miles southwest of Milford), 2) the central Milford site (about 20 miles southwest of Milford), and 3) the south Milford site (about 30 miles southwest of Milford). The north Milford site is no longer under consideration because of high mineral potential (and the Air Force policy of avoidance) as well as other environmental resource considerations.

Questions about revegetation were raised. It was mentioned that the Desert Range Experimental Station has revegetation plots. Project Oasis was also mentioned; this is a $25,000 study looking at various ecozones. It is an HDR subcontractor and HDR will forward the draft report to the Air Force sometime in the next month.

Several Milford residents complained about the lack of local input into the selection of the 10,000 acre sites within the Milford vicinity zone.

AIR FORCE SITING MEETING

Milford High School, Milford

1:00 - 5:00 p.m.

May 15, 1981

A G E N D A

I. Air Force Presentation of Pine and Wah Wah Valleys Environmental Assessments - Air Force

II. Discussion of Siting Problems in Pine and Wah Wah Valleys - Open

III. Discussion of Alternative DTN Routings for Pine and Wah Wah Valleys, Transmittal of Maps and Solicitation of Input - Air Force

IV. Discussion of ASC Siting near Delta, Transmittal of Maps and Solicitation of Input - Air Force

V. General Discussion of Beryl and Milford OB Siting - Air Force

DTN = Designated Transportation Network

ASC = Area Support Center

OB = Operating Base

BRIEFING PRESENTED BY

ERTEC WESTERN, INC.

ERTEC NORTHWEST, INC.

MILFORD, UTAH

15 MAY 1981

MX SITING MEETING
MILFORD, UTAH
15 MAY 1981

1) INTRODUCTION - (USAF)

2) PINE & WAH WAH - FIELD SURVEYS FOR MX IOC

   a) OVERVIEW
   b) GEOTECHNICAL CONSIDERATIONS
   c) CULTURAL RESOURCES
   d) BIOLOGICAL RESOURCES
   e) SUMMARY OF RESULTS

3) DTN SITING

   a) DTN CRITERIA
   b) COYOTE OB
   c) BERYL OB
   d) MILFORD OB
   e) PINE VS. WAH WAH DTN
      (1) SYSTEMS CONSIDERATIONS
      (2) ENVIRONMENTAL CONSIDERATIONS
      (3) MITIGATIONS

4) AREA SUPPORT CENTER SITING

   a) CRITERIA
   b) TULE VS. WHIRLWIND

5) OB SITING

6) DISCUSSION

FIELD SURVEYS, IOC VALLEYS

AGENDA

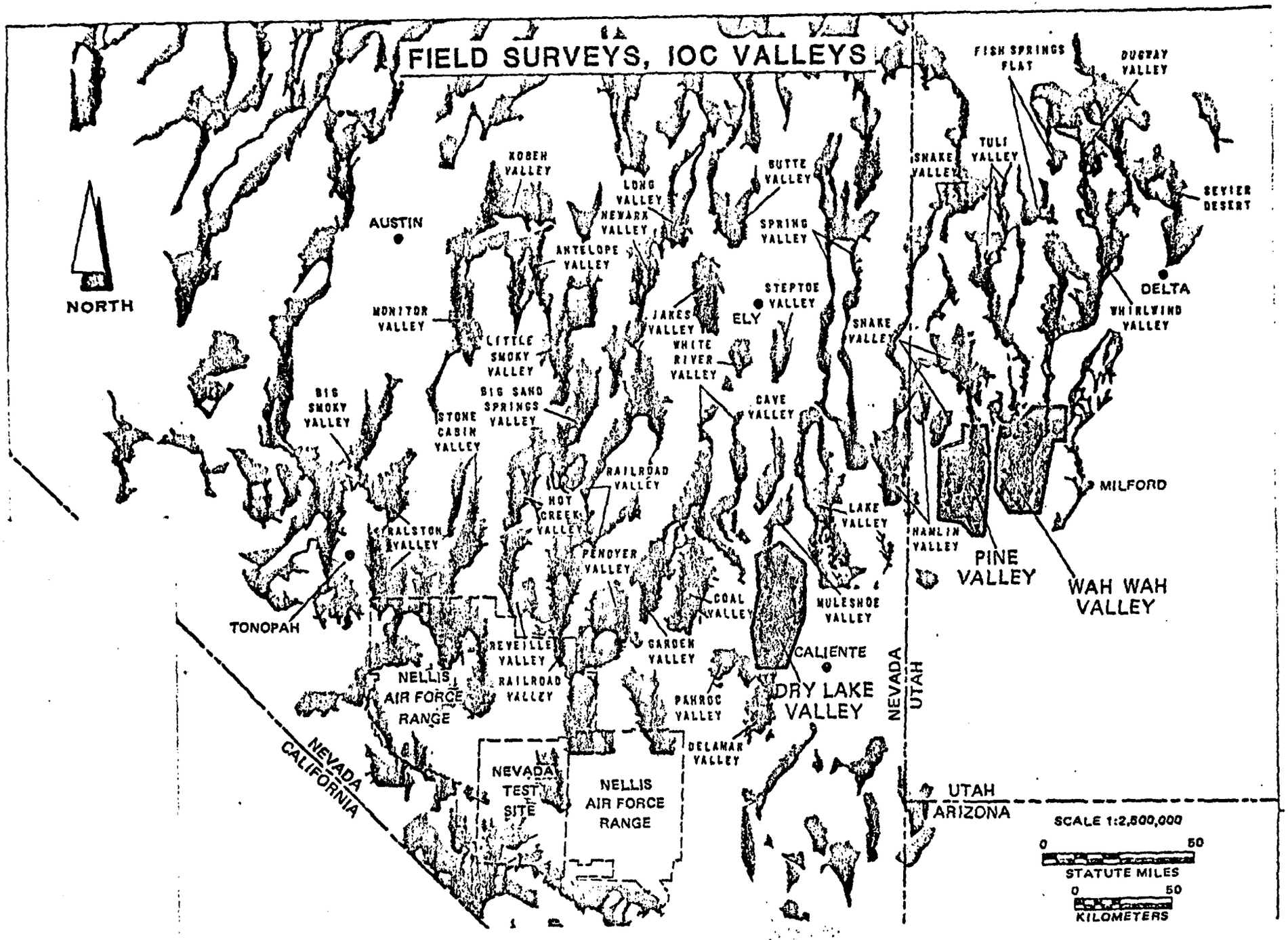
1. OVERVIEW OF PROGRAM
    - a. Definition
    - b. Objectives
    - c. Methodology
    - d. Schedule

2 GEOTECHNICAL CONSIDERATIONS
    - a. Methodology
    - b. Factors Affecting Shelter Locations
    - c. Results, Wah Wah Valley
    - d. Results, Pine Valley

3 CULTURAL RESOURCES
    - a. Methodology
    - b. Findings, Wah Wah Valley
    - c. Findings, Pine Valley

4 BIOLOGICAL RESOURCES
    - a. Methodology
    - b. Findings, Wah Wah Valley
    - c. Findings Pine Valley

5 SUMMARY OF RESULTS


FIELD SURVEYS, IOC VALLEYS
NORTH
AUSTIN
TONOPAH
ELY
DELTA
MILFORD
CALIENTE
KOBEH VALLEY
LONG VALLEY
NEWARK VALLEY
BUTTE VALLEY
SPRING VALLEY
ANTELOPE VALLEY
STEPTOE VALLEY
MONITOR VALLEY
JAKES VALLEY
WHITE RIVER VALLEY
LITTLE SMOKY VALLEY
BIG SMOKY VALLEY
BIG SAND SPRINGS VALLEY
STONE CABIN VALLEY
CAVE VALLEY
RAILROAD VALLEY
HOT CREEK VALLEY
RALSTON VALLEY
PENOYER VALLEY
LAKE VALLEY
COAL VALLEY
MULESHOE VALLEY
REVEILLE VALLEY
GARDEN VALLEY
RAILROAD VALLEY
PAHROC VALLEY
DELAMAR VALLEY
DRY LAKE VALLEY
NELLIS AIR FORCE RANGE
NEVADA TEST SITE
NELLIS AIR FORCE RANGE
NEVADA
CALIFORNIA
NEVADA
UTAH
UTAH
ARIZONA
FISH SPRINGS FLAT
DUGWAY VALLEY
SNAKE VALLEY
TULE VALLEY
SEVIER DESERT
WHIRLWIND VALLEY
SNAKE VALLEY
HAMLIN VALLEY
PINE VALLEY
WAH WAH VALLEY
SCALE 1:2,500,000
0 50
STATUTE MILES
0 50
KILOMETERS

FIELD SURVEYS, IOC VALLEYS

OBJECTIVES

- TO TEST FIELD PROCEDURES FOR DETERMINATION OF SHELTER, CMF, AND RSS LOCATIONS
- TO PROVIDE LEGAL DESCRIPTIONS FOR LAND WITHDRAWAL PURPOSES
- TO ASSESS ENVIRONMENTAL CONDITIONS AT SHELTER, CMF AND RSS SITES AND ALONG SOME ROAD CORRIDORS AND DETERMINE WHAT CHANGES ARE NEEDED TO MINIMIZE IMPACTS
- TO IDENTIFY PROBLEMS ASSOCIATED WITH PRESENT LAYOUT CRITERIA AND PROCEDURES
- TO DETERMINE THE NUMBER OF SITES TO BE RELOCATED FOR GEOTECHNICAL REASONS

FIELD SURVEYS, IOC VALLEYS

- FIELD WORK WILL BE PERFORMED IN THE FOLLOWING VALLEYS:

  DRY LAKE, NEVADA – 10 CLUSTERS
  PINE, UTAH – 5 CLUSTERS
  WAH WAH, UTAH – 5 CLUSTERS

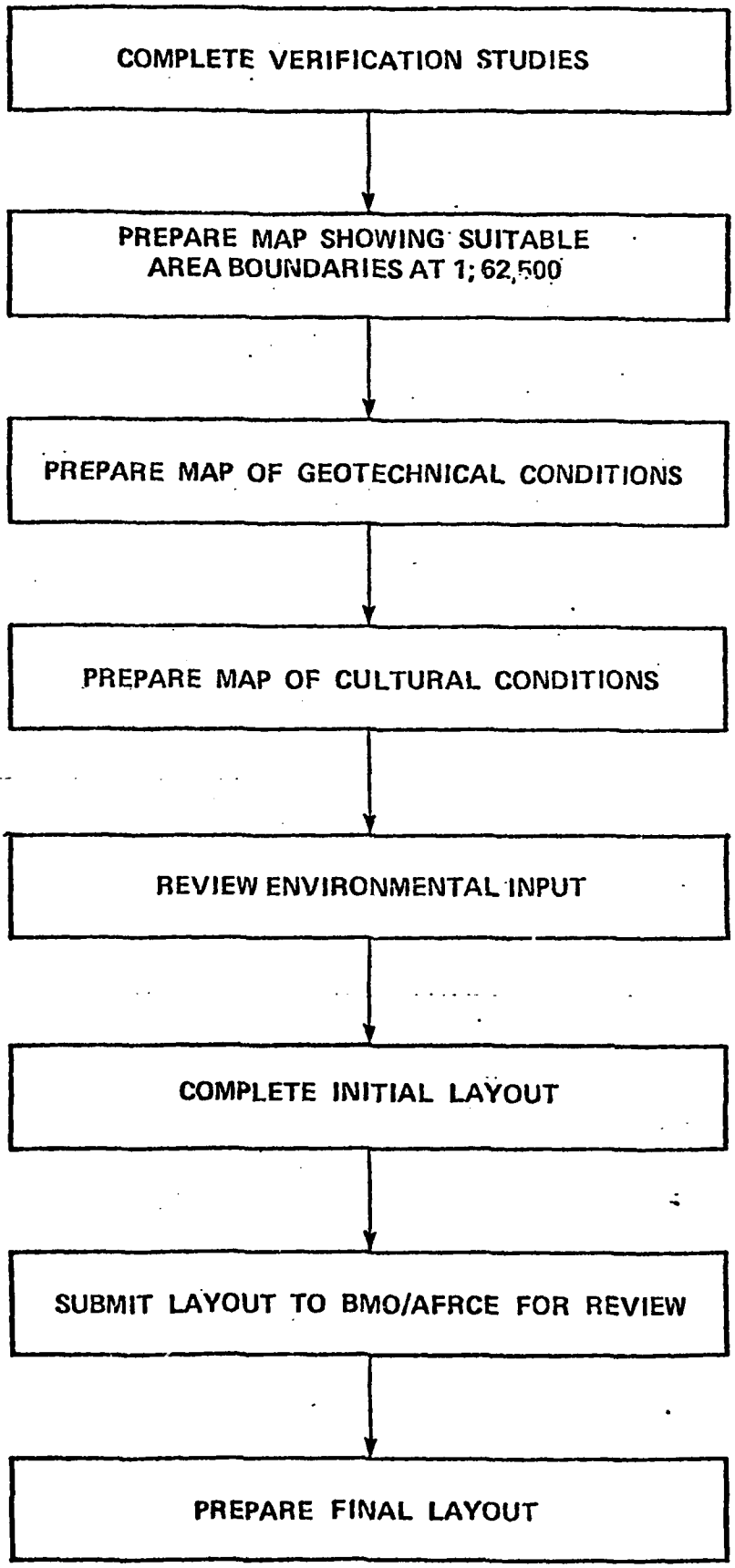
- FIELD SURVEYS WILL BE PERFORMED TO LOCATE AND PLACE MONUMENTS AT ALL SHELTER, CMF, AND RSS SITES

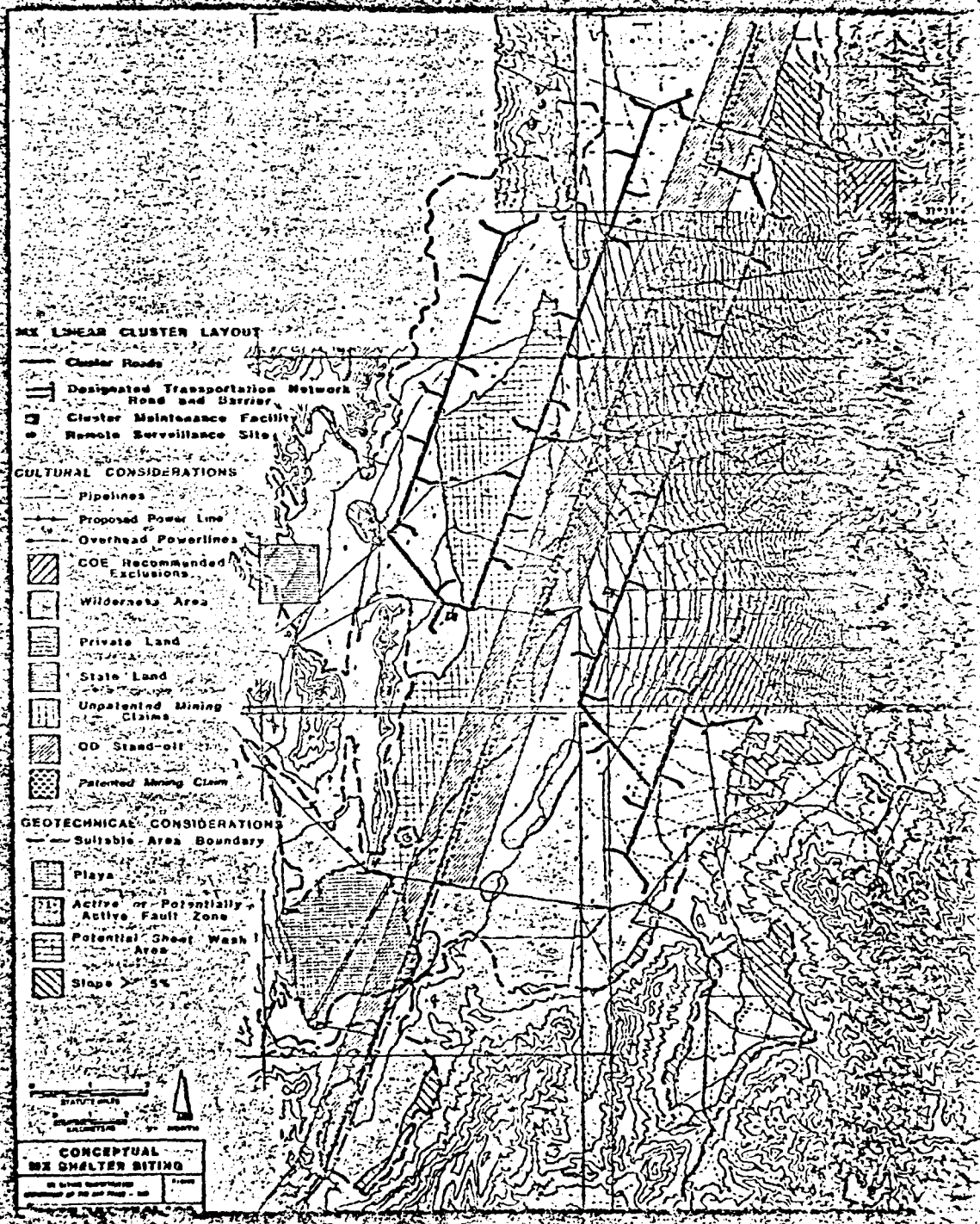
- THE ONLY ROADS TO BE STAKED ARE THE DTN AND ONE CLUSTER IN DRY LAKE VALLEY

- ENVIRONMENTAL INSPECTIONS WIL' BE MADE AT EACH SITE AND ALONG A 150 FOOT WIDE CORRIDOR ALONG THE STAKED ROAD ALIGNMENTS

- ENVIRONMENTAL REPORTS AND A GENERAL REPORT OF THE FIELD PROGRAM WILL BE PREPARED

VALLEY SHELTER LAYOUT METHODOLOGY




MX LINEAR CLUSTER LAYOUT
Cluster Roads
Designated Transportation Network Road and Barrier
Cluster Maintenance Facility
Remote Surveillance Site
CULTURAL CONSIDERATIONS
Pipelines
Proposed Power Line
Overhead Powerlines
COE Recommended Exclusions
Wilderness Area
Private Land
State Land
Unpatented Mining Claims
OD Stand-off
Patented Mining Claim
GEOTECHNICAL CONSIDERATIONS
Suitable Area Boundary
Playa
Active or Potentially Active Fault Zone
Potential Sheet Wash Area
Slope > 5%
STATUTE MILES
CONCEPTUAL
MX SHELTER SITING

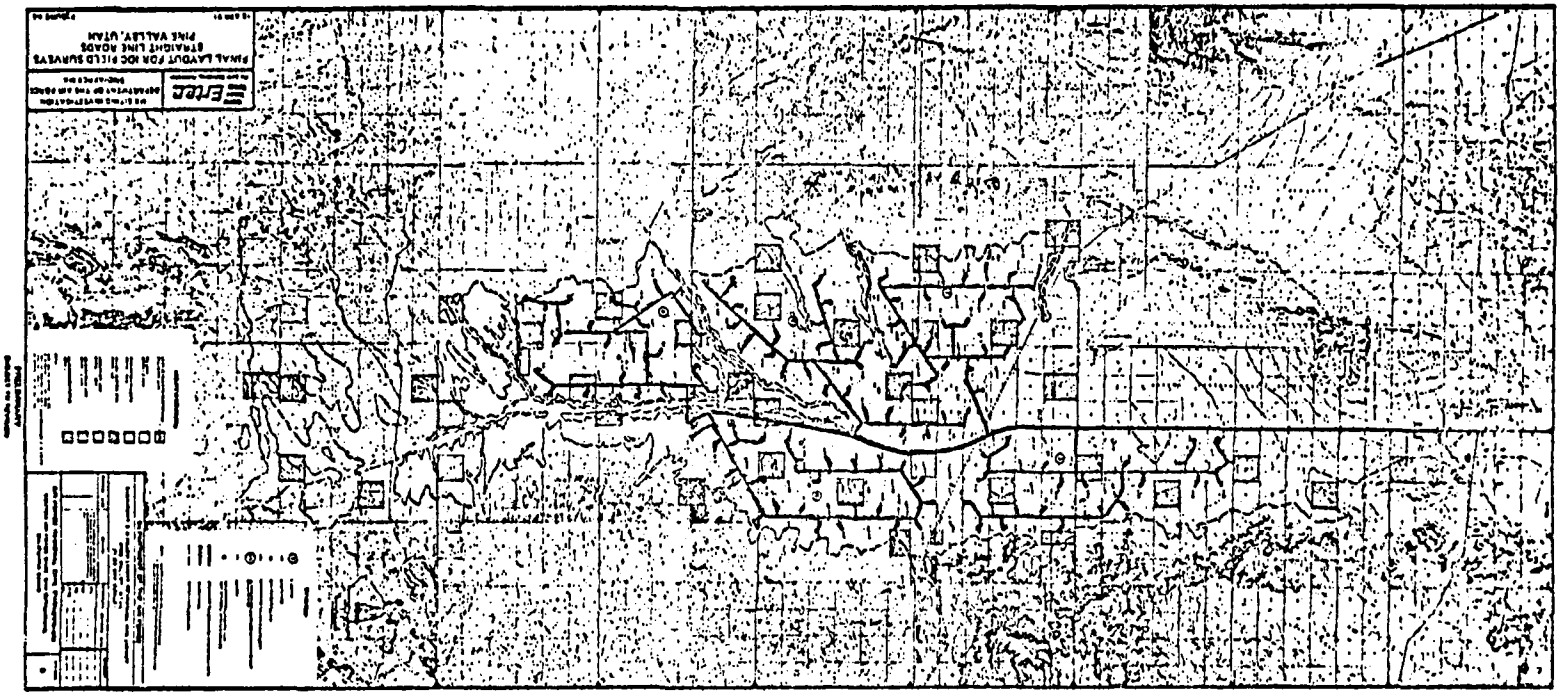
MX SITE LAYOUT REQUIREMENTS, HORIZONTAL SHELTER

- OPEN HEXAGONAL PATTERN
- SHELTER SPACING, 5200′ ± 200′
- NOT MORE THAN 3 NEAREST NEIGHBORS
- POSITIONS FOR 34 OR 35 SHELTERS, SHOW 23
- MINIMUM HORIZONTAL RADIUS OF CURVATURE 400′
- SHELTERS ORIENTED AWAY FROM NEAREST NEIGHBOR BY AT LEAST 55°
- AVOID USACE RECOMMENDED EXCLUSIONS
- POWER LINES <50 KV–750′
  50–250 KV–1250′
  >250 KV–2500′
- QUANTITY DISTANCES (AFR 127–100)
  Protective structure and CMF to:
  - Existing roads with ADT >50 ---1780′
  - Inhabited building ----------2965′
  - Pipelines ---------- 300′
- CLUSTER ROAD GRADES TO NOT EXCEED 5%

MX SITE LAYOUT CONSIDERATIONS

- AVOID ADVERSE TERRAIN
- AVOID PERENNIAL DRAINAGES
- AVOID PLAYAS
- AVOID ACTIVE AND POTENTIALLY ACTIVE FAULTS
- AVOID PRIVATE PROPERTY, IF POSSIBLE
- AVOID AREAS SUBJECT TO SHEET FLOODING, IF POSSIBLE
- NORTH-SOUTH ORIENTATION OF CLUSTER ROADS WHENEVER POSSIBLE
- AVOID MINING DISTRICTS, ACTIVE MINES AND AREAS OF HIGH MINERAL POTENTIAL
- AVOID WILDERNESS AREAS, PARKS, MONUMENTS, INDIAN RESERVATIONS, WILDLIFE REFUGES, ETC.

FINAL LAYOUT FOR IOC FIELD SURVEYS
STRAIGHT LINE ROAD
WAH WAH VALLEY, UTAH
18 APR 81
FIGURE 5-4
Ertec
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
DEPARTMENT OF THE AIR FORCE
AIR FORCE REGIONAL CIVIL ENGINEER-WE
PRELIMINARY
SUBJECT TO REVISION


FINAL LAYOUT FOR ICC FIELD SURVEYS
STRAIGHT LINE ROADS
PINE VALLEY, UTAH

FIELD SURVEY METHODOLOGY
IOC VALLEYS

PREPARE SHELTER LAYOUT AT 1:62500 SCALE

↓

SUBMIT LAYOUT TO AFRCE FOR REVIEW

↓

FINALIZE LAYOUT

↓

TRANSFER LAYOUT TO 1:9600 SCALE MAPS

↓

ADJUST LAYOUT TO MEET CRITERIA AND AVOID FEATURES IDENTIFIED BY MORE DETAILED MAP SCALE

↓

DIGITIZE SELECTED POINTS AT SHELTER, CMF AND RSS SITES

↓

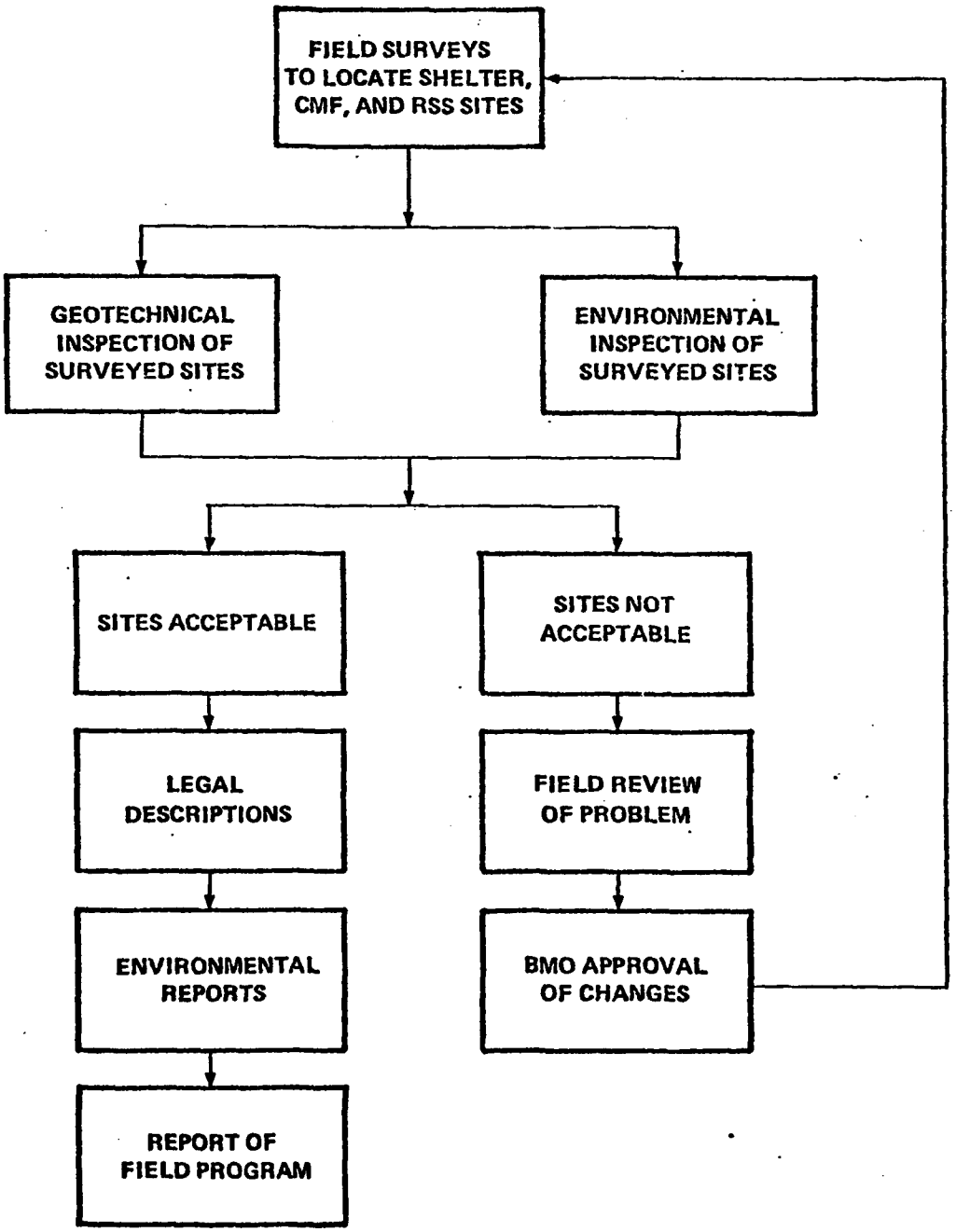
RUN COMPUTER CHECK OF SPACING AND ORIENTATION OF SHELTERS AND DETERMINE STATE PLANE COORDINATES OF DIGITIZED POINTS

↓

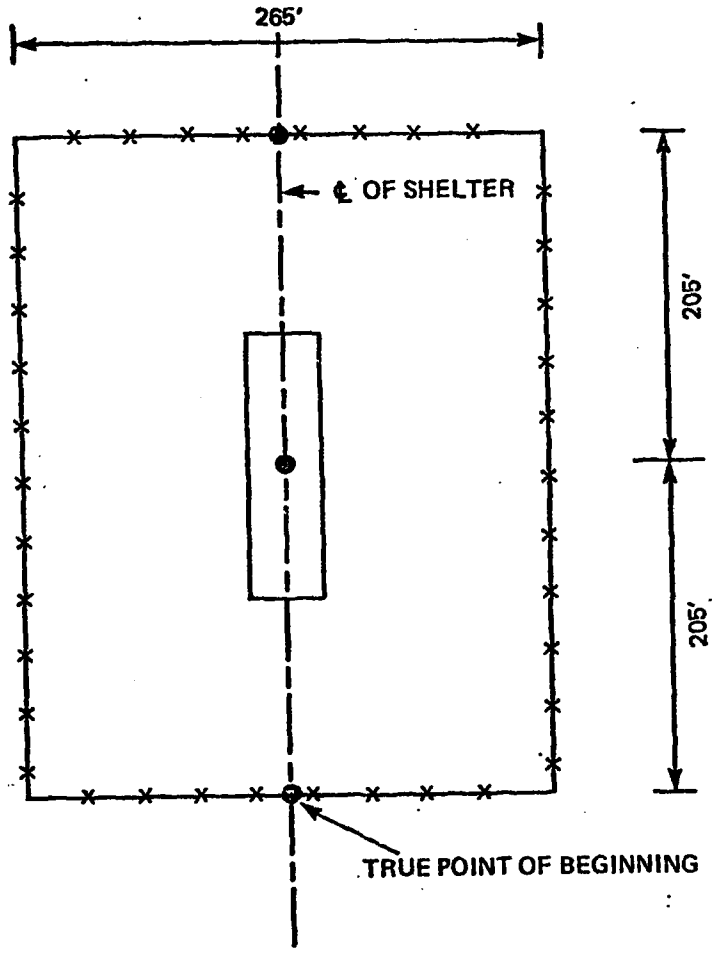
PERFORM FIELD SURVEYS TO LOCATE SHELTER, CMF AND RSS SITES

FIELD PROCEDURES

DRY LAKE, PINE, and WAH WAH VALLEYS

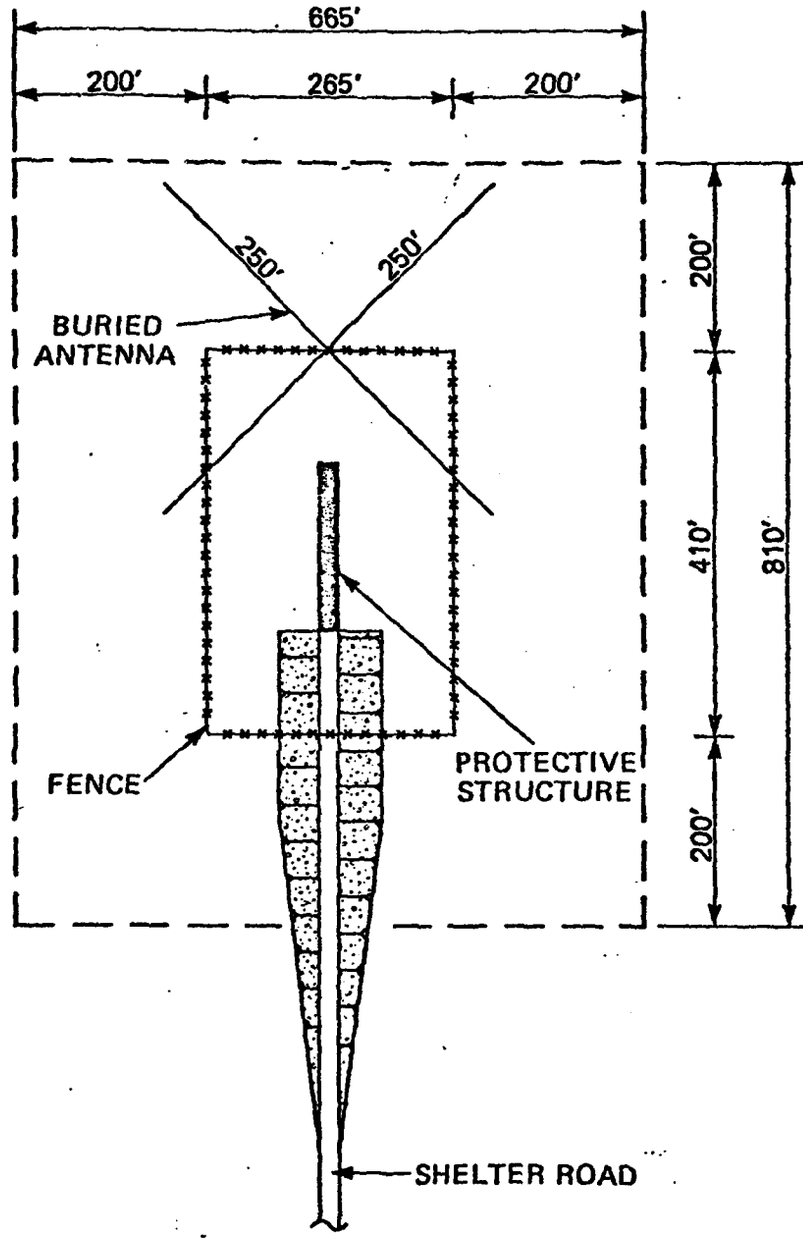


LOCATION OF SURVEY MONUMENTS AT SHELTER SITES, IOC VALLEYS



● POINTS WHERE SURVEY MONUMENTS WILL BE LOCATED

LOCATION OF SURVEY MONUMENTS AT SHELTER SITES, IOC VALLEYS	
MX SITING INVESTIGATION DEPARTMENT OF THE AIR FORCE - BMO	FIGURE 7-3
UGRD NATIONAL, INC.	



ENVIRONMENTAL INSPECTION
AREA AT SHELTER SITE

MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE — BMO

FIGURE
7-5

UGRO NATIONAL, INC.

GEOTECHNICAL METHODOLOGY

REVIEW 1:9600 MAPS

- REVIEW 1:25,000 AERIAL PHOTOGRAPHS
- REVIEW VERIFICATION DATA
- PERFORM SITE INSPECTIONS AND IDENTIFY SITES WITH PROBLEMS . PREPARE FIELD SKETCHES AND TAKE PHOTOGRAPHS
- PREPARE LIST OF RECOMMENDED RESITINGS AND REASONS FOR RESITINGS
- REVIEW OF LIST BY ERTEC ENGINEERS AND GEOLOGIST AND BY PERSONNEL FROM AFRCE, BMO, TRW, AND CORPS OF ENGINEERS
- FIELD REVIEW OF SELECTED SITES
- FINAL RESITING DECISIONS BY AFRCE

GEOTECHNICAL FACTORS AFFECTING SHELTER LOCATIONS

I SUITABLE AREA FACTORS (SITING CRITERIA)

- Surface or Shallow Rock
- Surface or Shallow Water
- Adverse Terrain
- Slopes Greater Than 10%

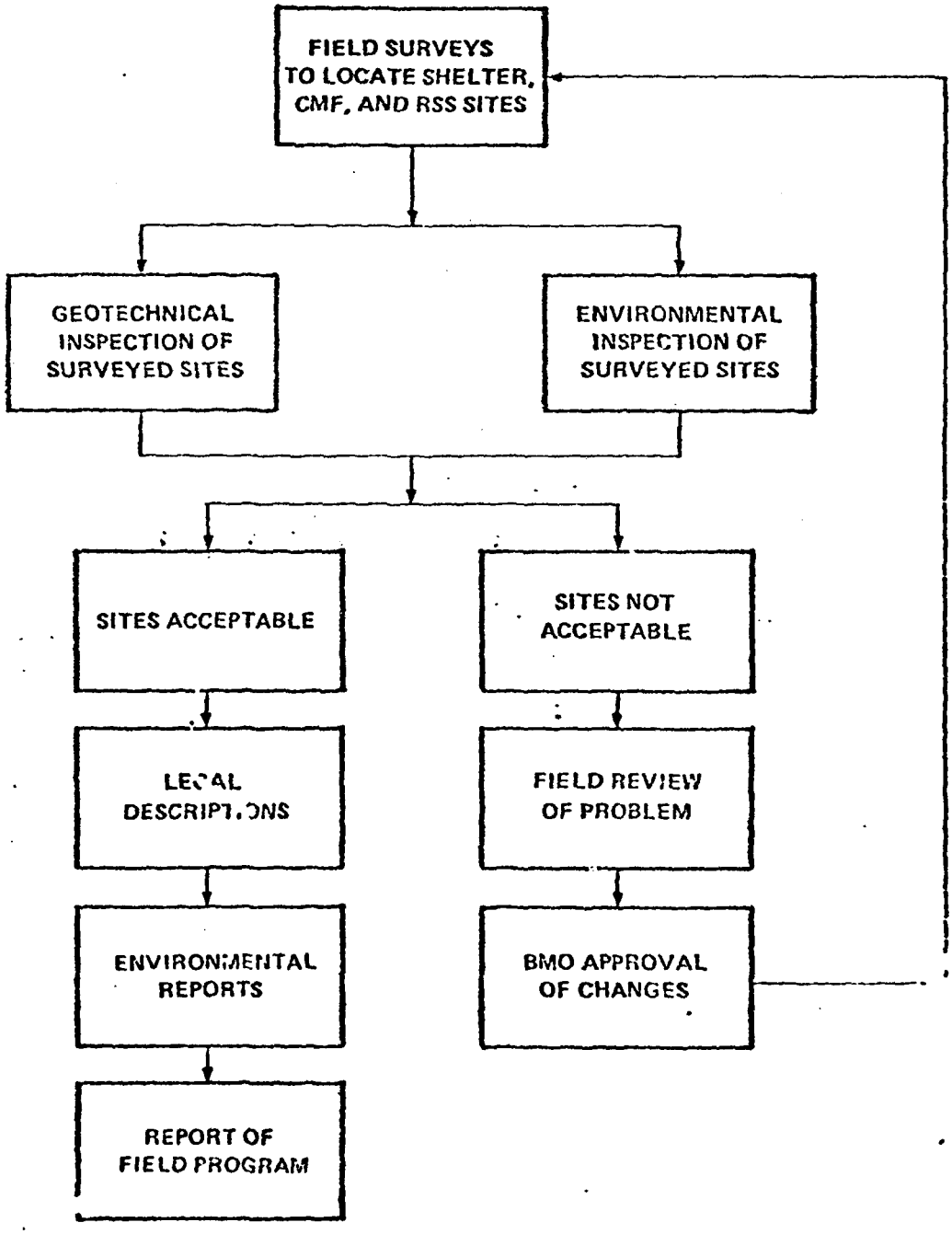
II SITEABLE AREA FACTORS (EVALUATION)

- Drainages and Washes
- Active and Potentially Active Faults
- Playa
- Ground Cracks
- Potential For Sheet Flooding

V64

FIELD PROCEDURES

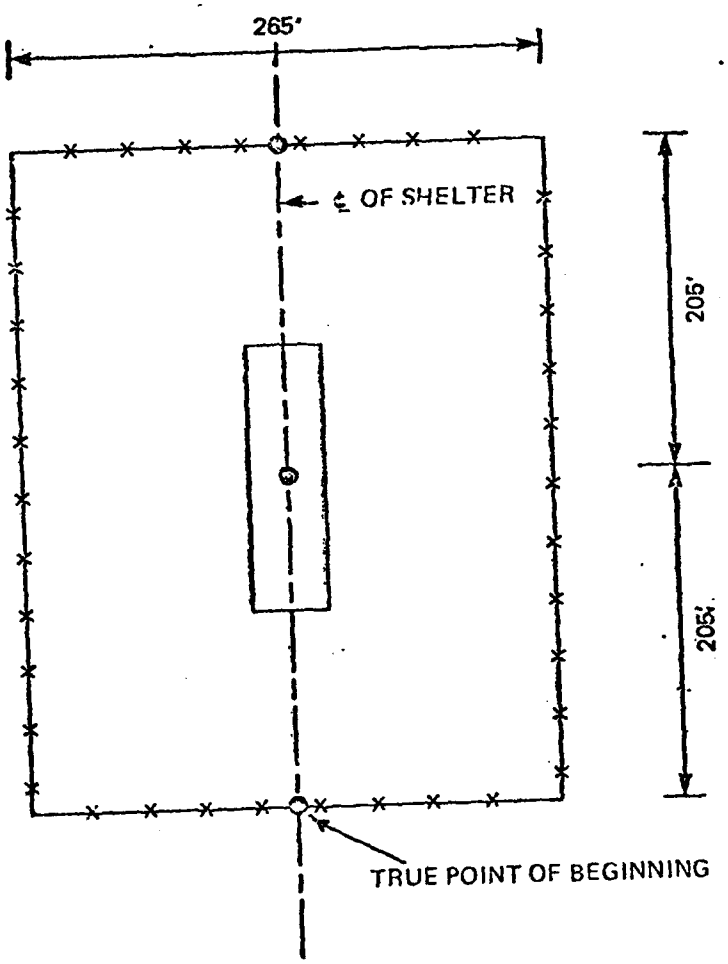
DRY LAKE, PINE, and WAH WAH VALLEYS



V65

H.G. DANIELS CO.
2543 WEST 6TH ST.
LOS ANGELES, CA. 90057

LOCATION OF SURVEY
MONUMENTS AT SHELTER SITES, IOC VALLEYS



● POINTS WHERE SURVEY MONUMENTS WILL BE LOCATED

SUMMARY OF RESULTS
FIELD SURVEYS, IOC VALLEYS

NUMBER OF SHELTERS RESITED FOR GEOTECHNICAL REASONS

SUITABLE AREA FACTORS	WAH WAH VALLEY	PINE VALLEY
Surface or Shallow Rock	1	0
Surface or Shallow Water	0	0
Adverse Terrain	0	0
Slope Greater Than 10%	0	0
Sub Total	1	0
SITEABLE AREA FACTORS		
Drainages and Washes	13	14
Active and Potentially Active Faults	0	1
Playa	0	1
Ground Cracks	0	0
Potential For Sheet Flooding	0	0
Sub Total	13	16
TOTAL	14	16

ENVIRONMENTAL SURVEY PROCEDURES

- DEVELOPED IN CLOSE COOPERATION WITH BUREAU OF LAND MANAGEMENT AND U.S. AIR FORCE
- I O C VALLEYS TO SERVE AS TEST OF PROCEDURES
- PROCEDURES MODIFIED AS A RESULT OF FIELD EXPERIENCE

SURVEY UNITS:

1. HORIZONTAL SHELTER SITES (HSS)

2. REMOTE SURVEILLANCE SITES (RSS)

3. CLUSTER MAINTENANCE FACILITIES (CMF)

SURVEY AREAS:

1. HSS 810 FEET X 665 FEET (12.36 ACRES)

2. RSS 300 FEET X 300 FEET (2.06 ACRES)

3. CMF 1,140 FEET X 750 FEET (19.62 ACRES)

QUALITY ASSURANCE

1. FORMS (SAMPLE UNIT FORM, WILDLIFE & PLANT FORMS, MASTER SPECIES LIST, SITE RECORD FORMS)
2. JOURNALS (FIELD NOTES)
3. VOUCHER COLLECTIONS (BIOLOGY ONLY)
4. ADVISORS & EXPERTS
5. VERIFICATION PHOTOS

AGENCY CONTACTS
CULTURAL RESOURCES

BUREAU OF LAND MANAGEMENT STATE
AND DISTRICT OFFICES

UTAH STATE HISTORICAL SOCIETY
ANTIQUITIES SECTION, SALT LAKE CITY

UNIVERSITY OF UTAH

SOUTHERN UTAH STATE UNIVERSITY

BLM LIST OF CULTURAL RESOURCES REQUIRING AVOIDANCE

PREHISTORIC

1. SITES OR FEATURES LIKELY TO HAVE DEPTH
2. ROCK SHELTERS AND ROCK ART SITES IMMEDIATELY EXPOSED TO FACILITY LOCATION
3. SITES THAT ARE:
   - A. LARGE LITHIC SCATTERS WITH TEMPORALLY OR CULTURALLY DIAGNOSTIC ARTIFACTS
   - B. MULTI-COMPONENT
   - C. MULTIPLE ACTIVITY AREAS
4. BURIAL SITES
5. ROCK ALIGNMENTS AND CAIRNS

HISTORIC

1. STRUCTURES OLDER THAN 50 YEARS
2. MULTI-COMPONENT OR MULTIPLE ACTIVITY SITES
3. MINING DEVELOPMENTS
4. CEMETERIES
5. EARLY ROADS AND TRAILS

NOTE:

IN ADDITION TO THESE CRITERIA, IT WAS AGREED THAT SINCE SO FEW ARCHEOLOGICAL SITES WERE DISCOVERED IN PINE AND WAH WAH VALLEYS CERTAIN LITHIC SCATTERS IN THESE VALLEYS WOULD REQUIRE AVOIDANCE

CULTURAL RESOURCE SURVEY PROCEDURES

1. 25- METER TRANSECTS (BLM "INTENSIVE" SURVEY)
2. DATA RECORDED ON STANDARD SAMPLE UNIT RECORD AND ANTIQUITIES SITE FORMS DEVELOPED FOR THE MX PROJECT

CULTURAL RESOURCE COLLECTION POLICY

1. ISOLATED ARTIFACTS DIAGNOSTIC OF CULTURE OR CHRONOLOGY

WAH WAH VALLEY

CULTURAL RESOURCES FINDINGS

A. PREHISTORIC

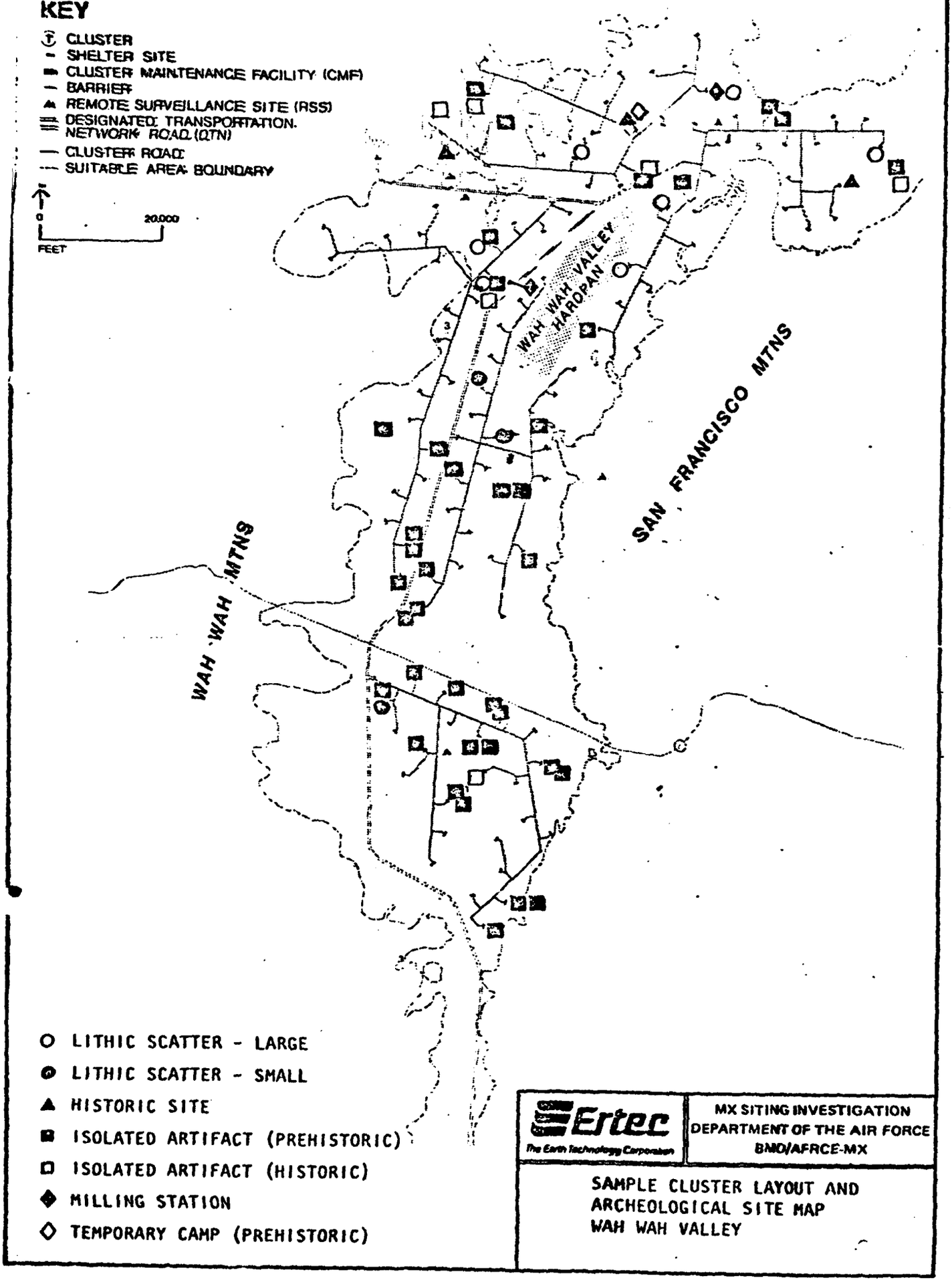
1. ISOLATED ARTIFACTS		39
2. LITHIC SCATTERS		11
	TOTAL	50

B. HISTORIC

1. ISOLATED ARTIFACTS		6
2. SCATTERS		2
	TOTAL	8

C. PREHISTORIC AND HISTORIC

1 SMALL TEMPORARY CAMPSITE WITH HISTORIC TRASH DUMP


KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
WAH WAH VALLEY
HAROPAN
SAN FRANCISCO MTNS
WAH WAH MTNS
LITHIC SCATTER - LARGE
LITHIC SCATTER - SMALL
HISTORIC SITE
ISOLATED ARTIFACT (PREHISTORIC)
ISOLATED ARTIFACT (HISTORIC)
MILLING STATION
TEMPORARY CAMP (PREHISTORIC)
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
SAMPLE CLUSTER LAYOUT AND
ARCHEOLOGICAL SITE MAP
WAH WAH VALLEY

WAH WAH VALLEY
CULTURAL RESITINGS

WAH WAH VALLEY

SHELTER UNITS

4/8 - LARGE LITHIC SCATTER

5/5 - LARGE LITHIC SCATTER

5/7 - LARGE LITHIC SCATTER

CLUSTER MAINTENANCE FACILITY 3 -

SMALL LITHIC SCATTER, PREHISTORIC

AND HISTORIC ISOLATES

TOTAL 4

PINE VALLEY
CULTURAL RESOURCES FINDINGS

A. PREHISTORIC

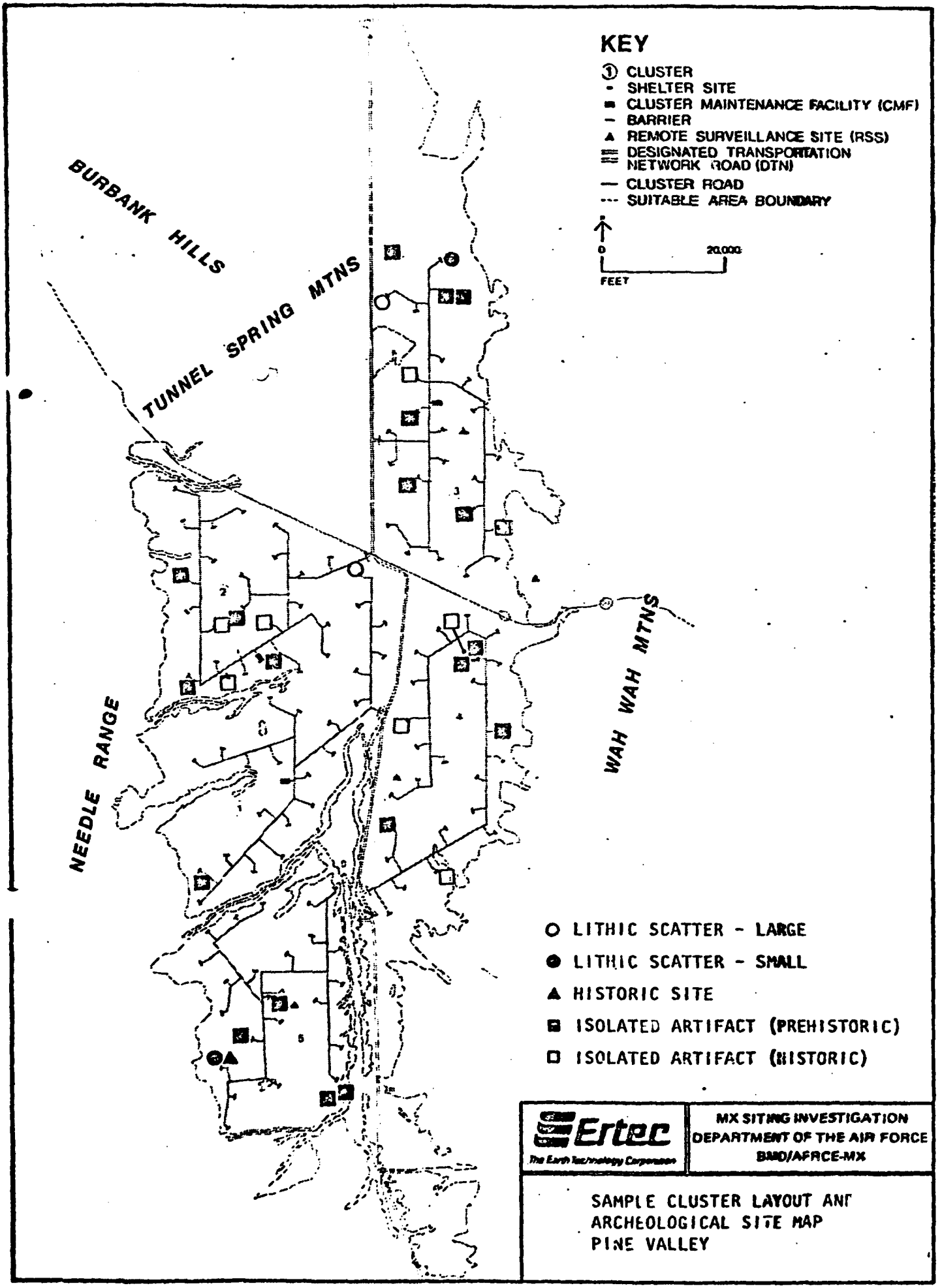
1. ISOLATED ARTIFACTS	20
2. LITHIC SCATTERS	3
TOTAL	23

B. HISTORIC

1. ISOLATED ARTIFACTS	8

C. PREHISTORIC AND HISTORIC

1. HISTORIC TRASH DUMP WITH FLAKES


KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
BURBANK HILLS
TUNNEL SPRING MTNS
NEEDLE RANGE
WAH WAH MTNS
LITHIC SCATTER - LARGE
LITHIC SCATTER - SMALL
HISTORIC SITE
ISOLATED ARTIFACT (PREHISTORIC)
ISOLATED ARTIFACT (HISTORIC)
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMD/AFRCE-MX
SAMPLE CLUSTER LAYOUT AND
ARCHEOLOGICAL SITE MAP
PINE VALLEY

PINE VALLEY
CULTURAL RESITINGS

PINE VALLEY

SHELTER UNITS

1/1 - LITHIC SCATTER

3/21 - LITHIC SCATTER

TOTAL 2

PURPOSE OF BIOLOGICAL STUDIES

- TO OBTAIN SITE-SPECIFIC DATA FROM IOC VALLEYS WITH EMPHASIS ON PROTECTED SPECIES AND HABITATS
- TO EVALUATE SITE-SPECIFIC IMPACTS AND MITIGATION MEASURES
- TO TEST AND IMPROVE FIELD METHODS

APPROACH TO BIOLOGICAL STUDIES

A. REVIEW AND SUMMARIZE EXISTING DATA FROM VARIOUS SOURCES:

- BLM – UTAH STATE OFFICE
  - CEDAR CITY DISTRICT OFFICE
- UTAH DIVISION OF WILDLIFE RESOURCES
- UTAH NATIVE PLANT SOCIETY
- OTHERS
  - USFWS
  - EPA
  - UNIVERSITIES

B. CONDUCT FIELD PROGRAM

- METHODS DEVELOPED IN CONJUNCTION WITH BLM
- CONDUCTED FROM NOVEMBER 1980 TO MARCH 1981

LISTS OF PROTECTED SPECIES AND HABITATS IN UTAH

- FEDERALLY "LISTED" T & E WILDLIFE (FR, MAY 20, 1980)
- FEDERALLY "LISTED", "PROPOSED", AND "CURRENTLY UNDER REVIEW" T & E PLANTS (FR, DECEMBER 15, 1980)
- "VERTEBRATE SPECIES OF WILDLIFE HAVING HIGH INTEREST TO THE STATE OF UTAH" (UDWR, JUNE, 1980)
- "STATUS OF SELECTED NONGAME WILDLIFE AND PLANT SPECIES IN UTAH" (UDWR, MAY, 1980)
- CRITICAL HABITATS AND SENSITIVE SPECIES IN PINE AND WAH WAH VALLEYS (LETTER FROM DIRECTOR OF UDWR, DEC. 15, 1980)
- "UTAH THREATENED AND ENDANGERED PLANTS" (UNPS, JAN. 1980)
- UNOFFICIAL SENSITIVE PLANTS (CEDAR CITY BLM, JAN. 16, 1981)

BIOLOGY
FIELD METHODOLOGY

SITE LOCATION AND STAKING

TRAVERSES

- OVERVIEW OF VEGETATION, WILDLIFE, ABIOTIC CONDITIONS, AND DISTURBANCE FACTORS
- POTENTIAL T & E PLANTS, OTHER IMPORTANT FINDS MAPPED ON GRID

TRANSECTS

- 50-M LINE-INTERCEPTS
- PERENNIAL PLANTS COUNTED AND MEASURED

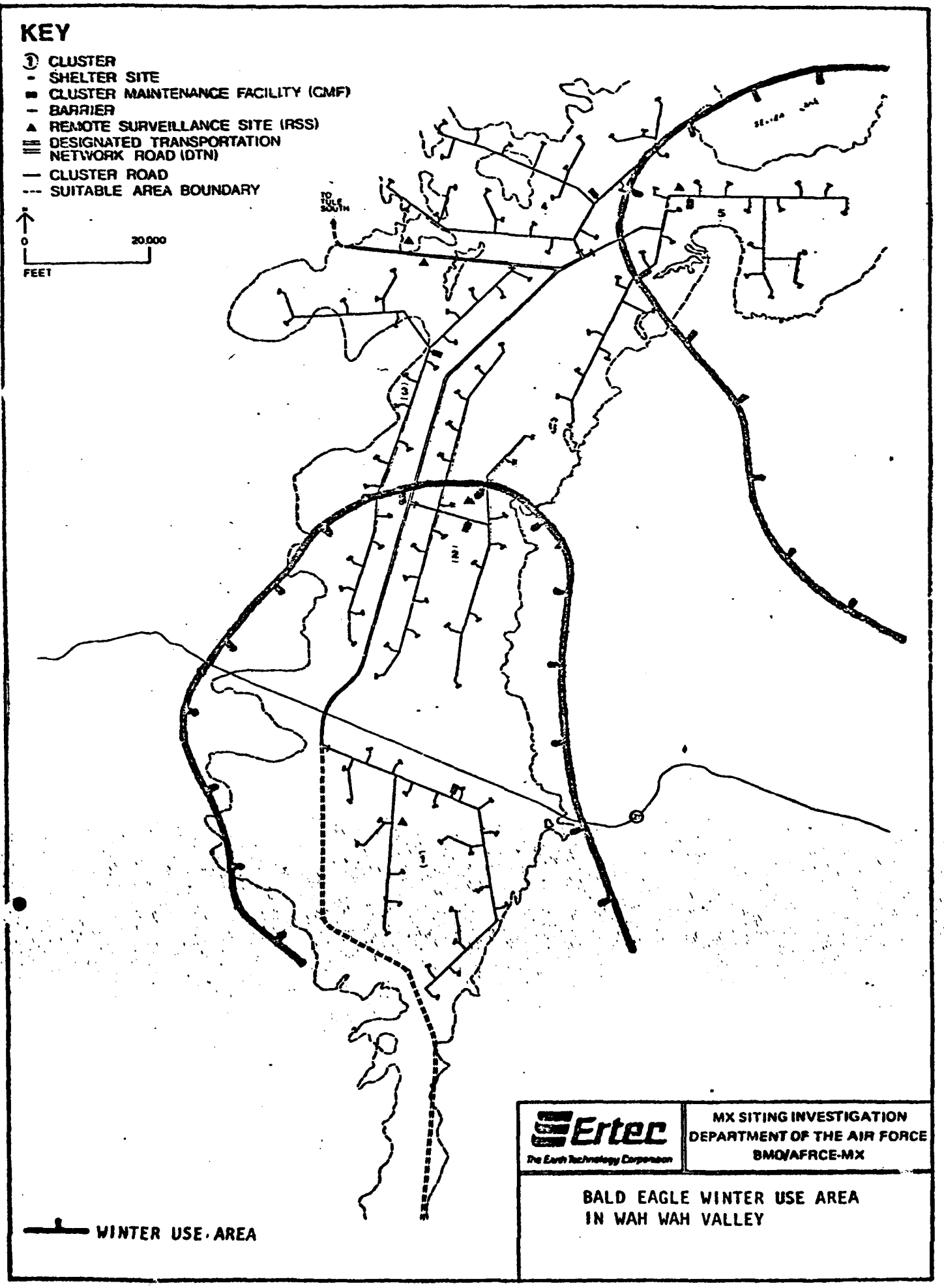
DOCUMENTATION

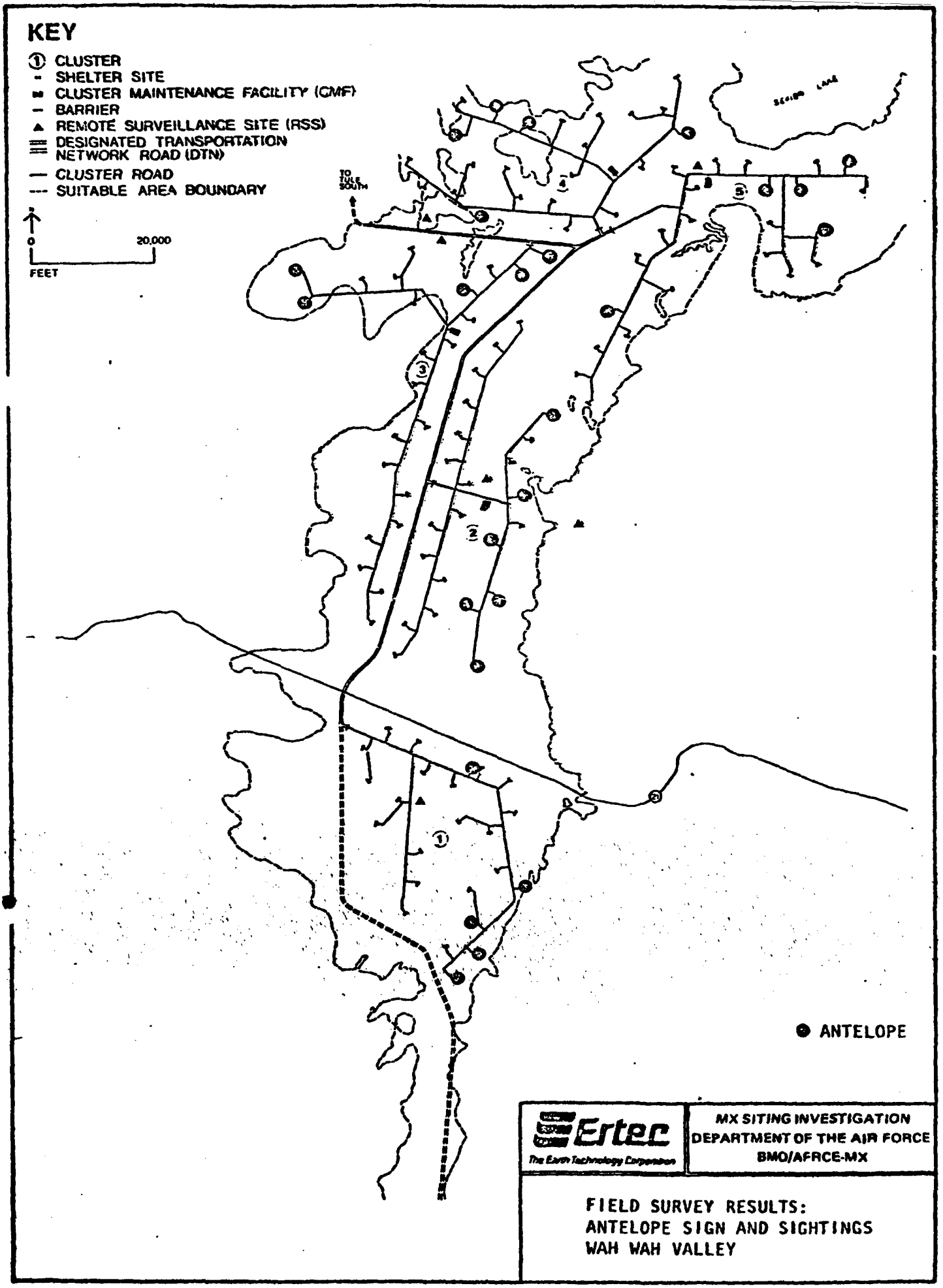
- VOUCHER COLLECTION
- PHOTOGRAPHY
- FIELD JOURNALS
- STANDARD DATA FORMS

GEMINI
Transparency Mounts
VISUAL EDUCATION PRODUCTS

WAH WAH VALLEY
BIOLOGY FINDINGS

- 7 SITES – CORYPHANTHA VIVIPARA AND SCLEROCACTUS PUBISPINUS (1–2 INDIVIDUALS EACH)
- 50 SITES – FOX DENS
- 21 SITES –ANTELOPE SIGNS (NO PATTERN)
- MORE THAN HALF THE SITES WITHIN BALD EAGLE WINTER USE AREA
- CLUSTER 5 – RELATIVELY DIVERSE (CACTUS, ANTELOPE, FOX)
- 13 POSSIBLE T & E PLANT SPECIES
- 3 POSSIBLE T & E PLANT VARIETIES


KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20,000
FEET
TO TULE SOUTH
WINTER USE AREA
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
BALD EAGLE WINTER USE AREA
IN WAH WAH VALLEY


KEY
① CLUSTER
- SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
– BARRIER
▲ REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
— CLUSTER ROAD
--- SUITABLE AREA BOUNDARY
0
20,000
FEET
TO TULE SOUTH
ANTELOPE
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
FIELD SURVEY RESULTS:
ANTELOPE SIGN AND SIGHTINGS
WAH WAH VALLEY

PINE VALLEY BIOLOGY FINDINGS

SITE SPECIFIC

- 2/13, 2/15, RSS 1 – EAGLE FORAGE AREA
- 3/6 – 6 C. vivipara, 3 S. pubispinus
- 4/7 – 32 C. vivipara
- 4/10 – 11 Sphaeralcea caespitosa,
  2 C. vivipara

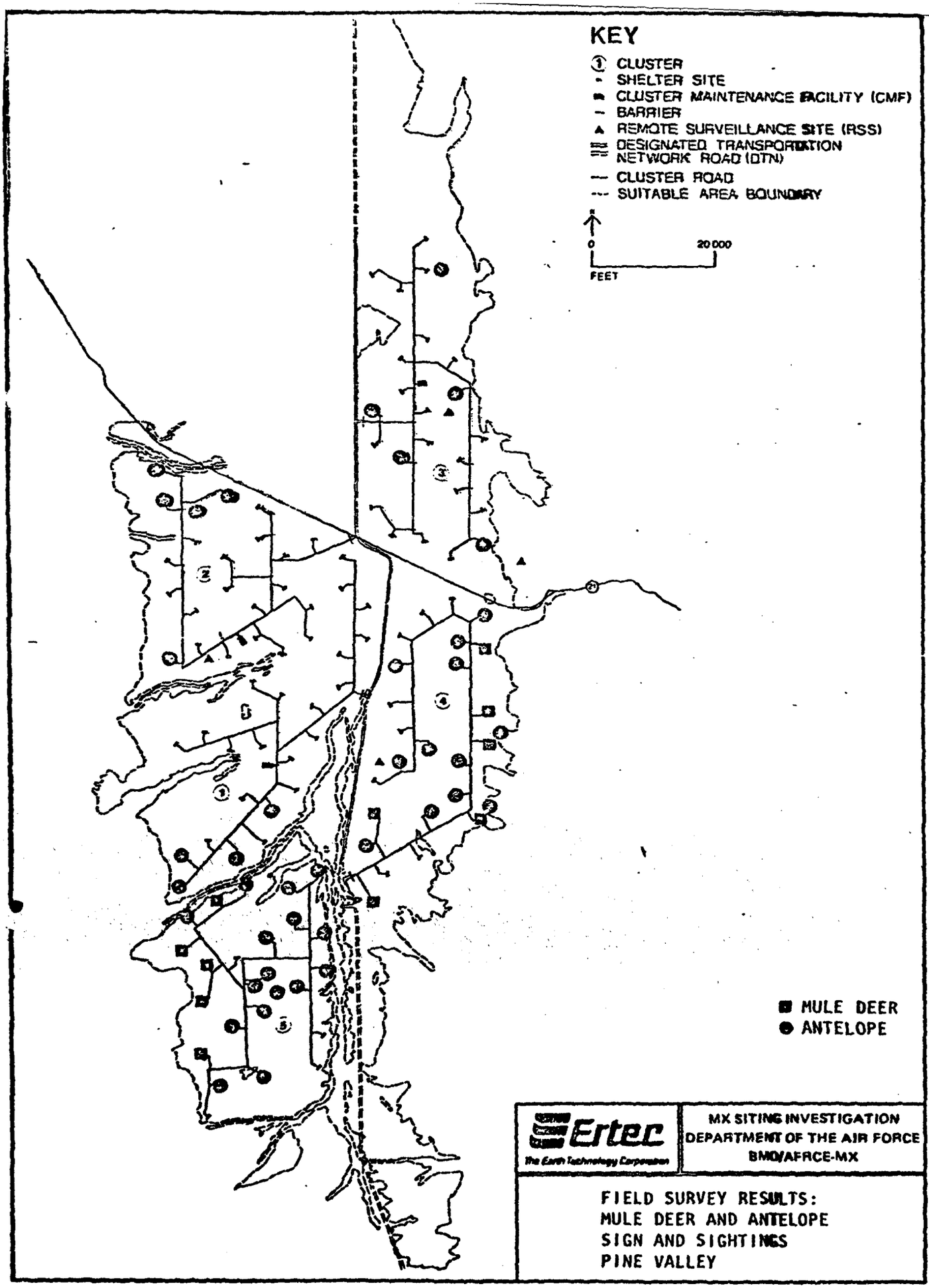
NUMEROUS SITES

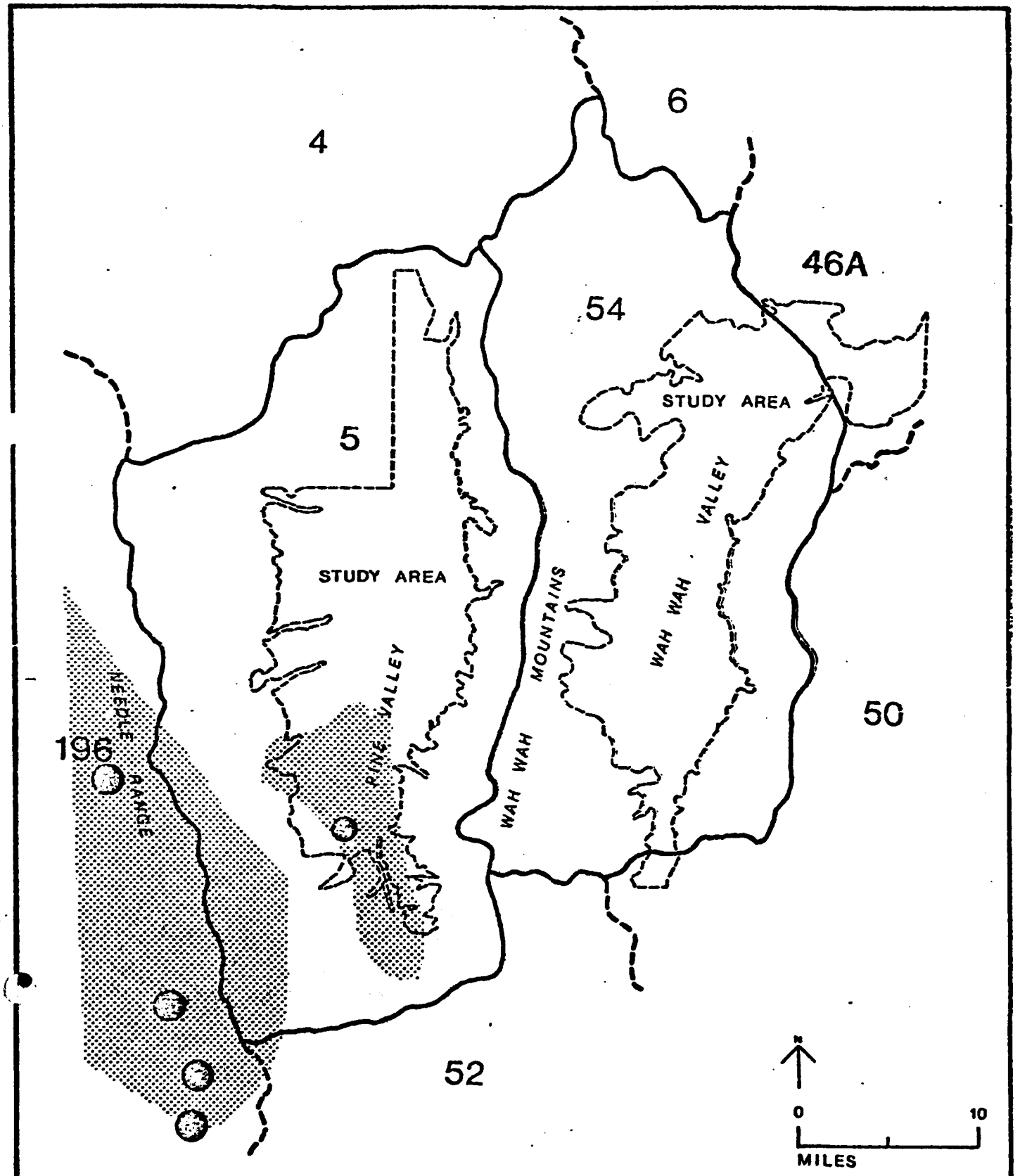
- 22 POSSIBLE T & E PLANT SPECIES
- 4 POSSIBLE T & E PLANT VARIETIES

CLUSTER 5

- SAGE GROUSE HABITAT AND STRUTTING GROUND AREA: SIGNS OF CURRENT USAGE PRESENT
- ANTELOPE SIGN (16 SITES)
- MULE DEER SIGN (5 SITES)
- MAJORITY OF JACKRABBIT (PREY FOR RAPTORS)
- ELK HABITAT (NO SIGNS EVIDENT)

UNCLASSIFIED

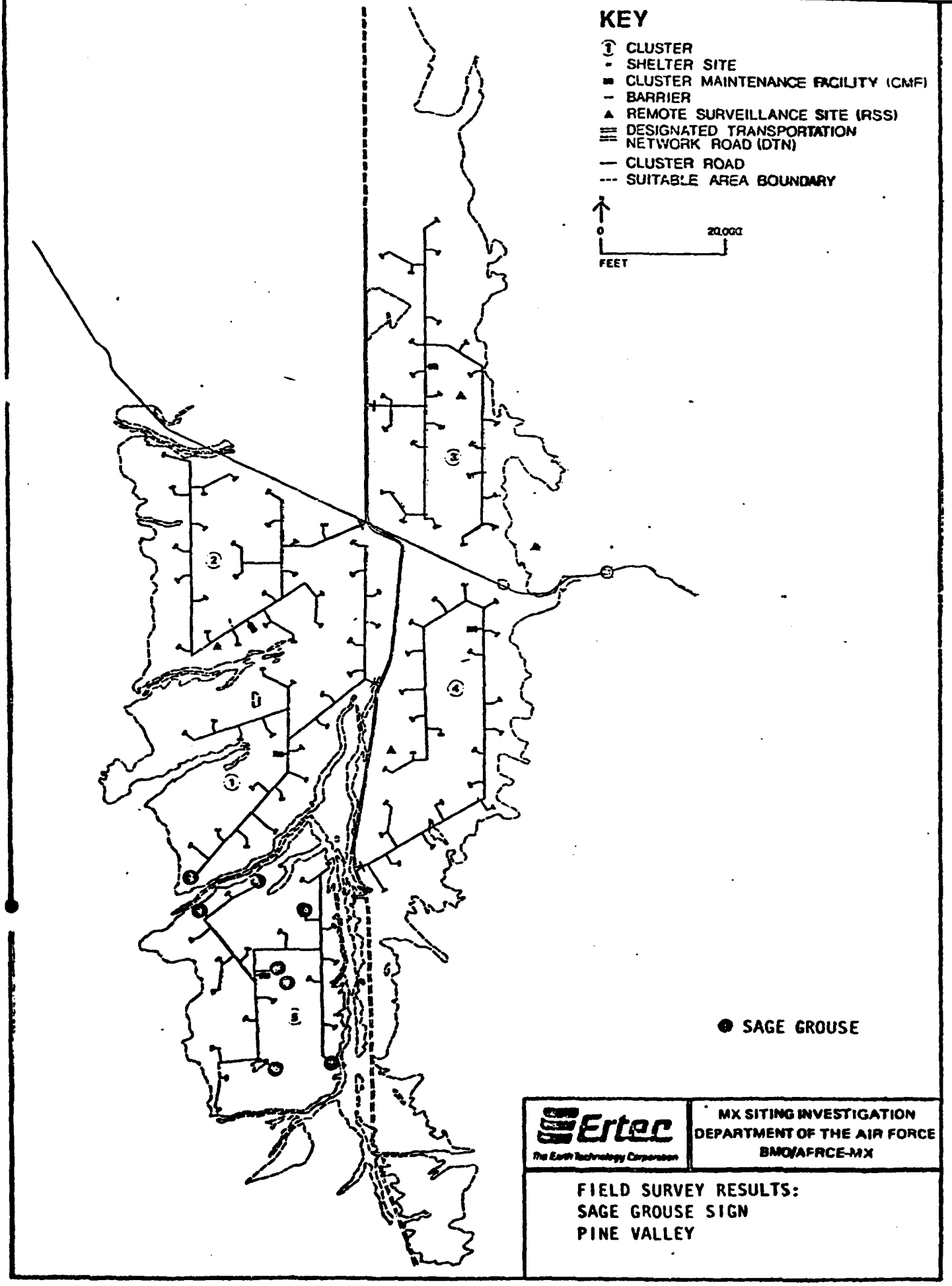

KEY
CLUSTER
SHELTER SITE
CLUSTER MAINTENANCE FACILITY (CMF)
BARRIER
REMOTE SURVEILLANCE SITE (RSS)
DESIGNATED TRANSPORTATION NETWORK ROAD (DTN)
CLUSTER ROAD
SUITABLE AREA BOUNDARY
0
20 000
FEET
MULE DEER
ANTELOPE
Ertec
The Earth Technology Corporation
MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX
FIELD SURVEY RESULTS:
MULE DEER AND ANTELOPE
SIGN AND SIGHTINGS
PINE VALLEY



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The Earth Technology Corporation

MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX

SAGE GROUSE RANGE AND STRUTTING GROUNDS IN THE PINE AND WAH WAH VICINITY



Ertec
The Earth Technology Corporation

MX SITING INVESTIGATION
DEPARTMENT OF THE AIR FORCE
BMO/AFRCE-MX

FIELD SURVEY RESULTS:
SAGE GROUSE SIGN
PINE VALLEY

CRITERIA FOR RECOMMENDED BIOLOGY RESITING

GENERAL APPROACH

- CASE BY CASE BASIS - NO HARD AND FAST RULE
- OVERALL ECOSYSTEM CONSIDERATION
- BIOLOGICAL FOCUS

DECISION BASE

- ON-SITE SURVEY RESULTS
- BACKGROUND RESEARCH (SPECIES, RANGE, POPULATION, HABITS, AND HABITAT)
- BLM / DEPT. OF WILDLIFE CONCERNS
- OUTSIDE EXPERTS IN SPECIAL AREAS
- LEGISLATIVE (FEDERAL, STATE, PRIVATE LISTINGS, FLPMA)
- FEDERAL, STATE, AND LOCAL STATUS

RESULTS OF FIELD SURVEYS
WAH WAH VALLEY, UTAH

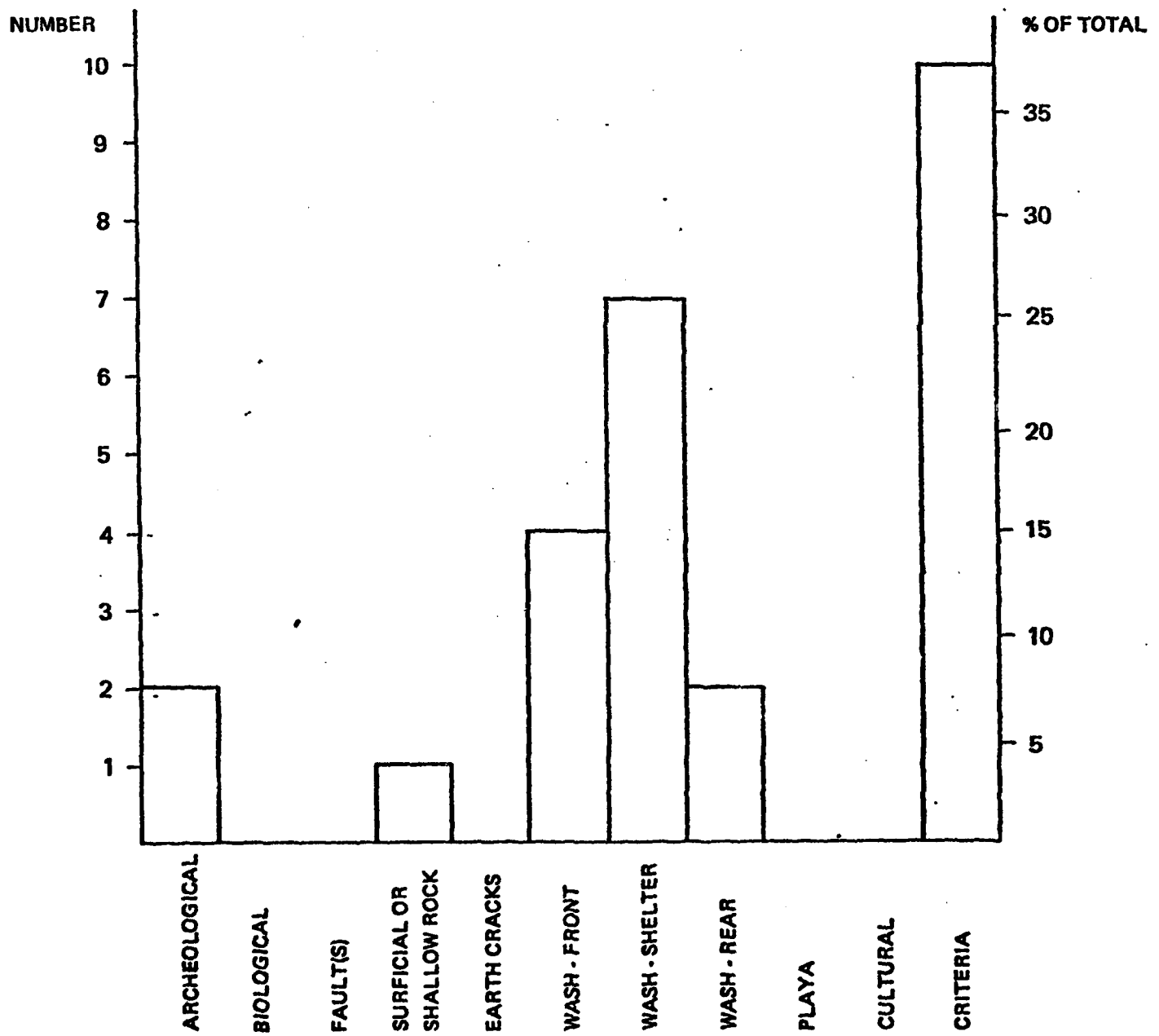
FACILITIES SITED

115 SHELTER SITES (HSS)

5 CLUSTER MAINTENANCE FACILITIES (CMF)

4 REMOTE SURVEILLANCE SITES (RSS)
(NOT APPLICABLE AFTER 12 MARCH 1981)

APPROVED RESITINGS: 26 SHELTERS

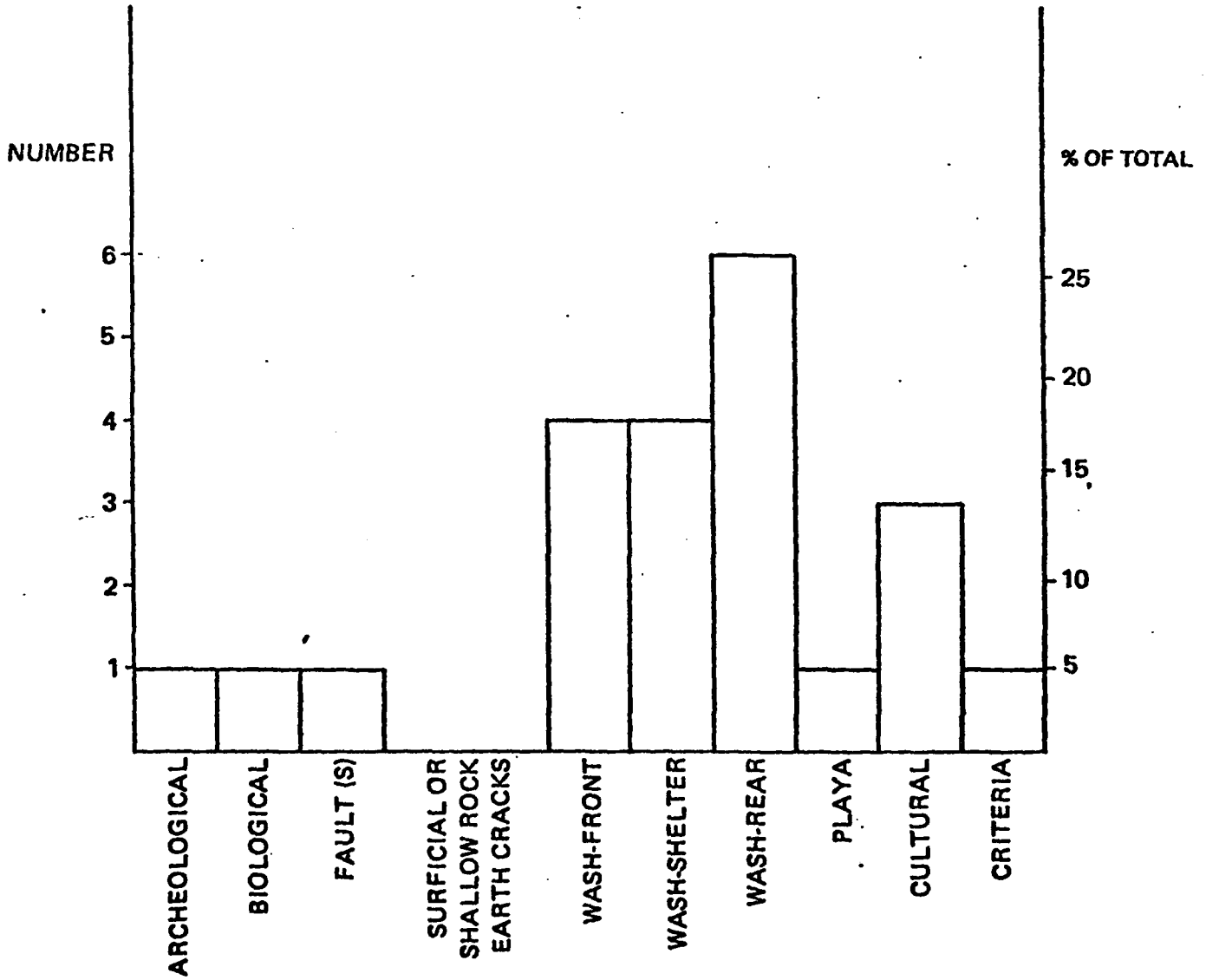


RESULTS OF FIELD SURVEYS
PINE VALLEY, UTAH

FACILITIES SITED

115	SHELTER SITES (HSS)
5	CLUSTER MAINTENANCE FACILITIES(CMF)
4	REMOTE SURVEILLANCE SITES (RSS) (NOT APPLICABLE AFTER 12 MARCH 1981)

APPROVED RESITINGS: 22 SHELTERS



DTN

- DESIGNATED TRANSPORTATION NETWORK
- ROAD SYSTEM FOR MOVING THE MISSILES BETWEEN THE MAIN O.B. AND THE DEPLOYMENT AREA

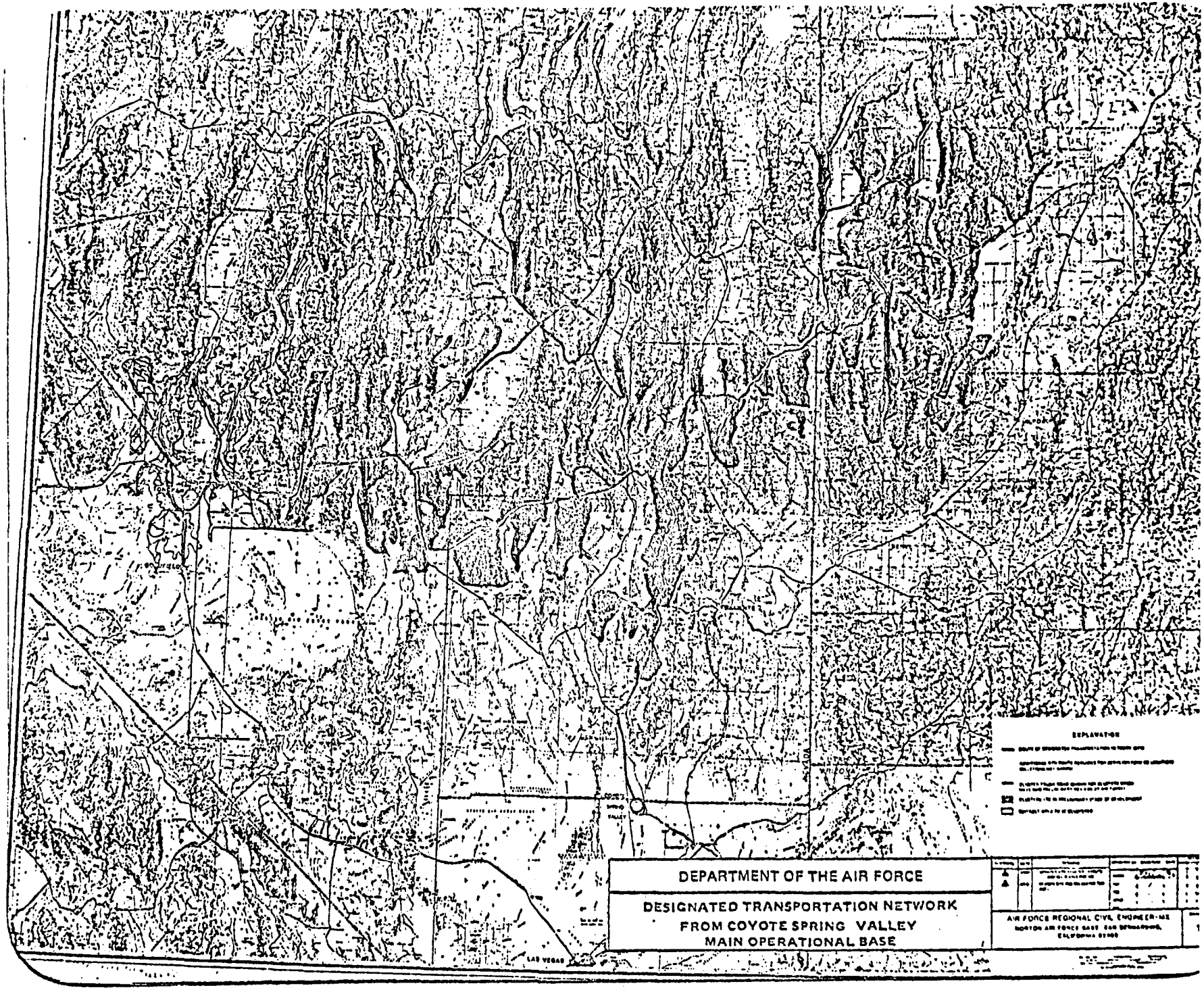
FACTORS INFLUENCING DTN ROUTE SELECTION

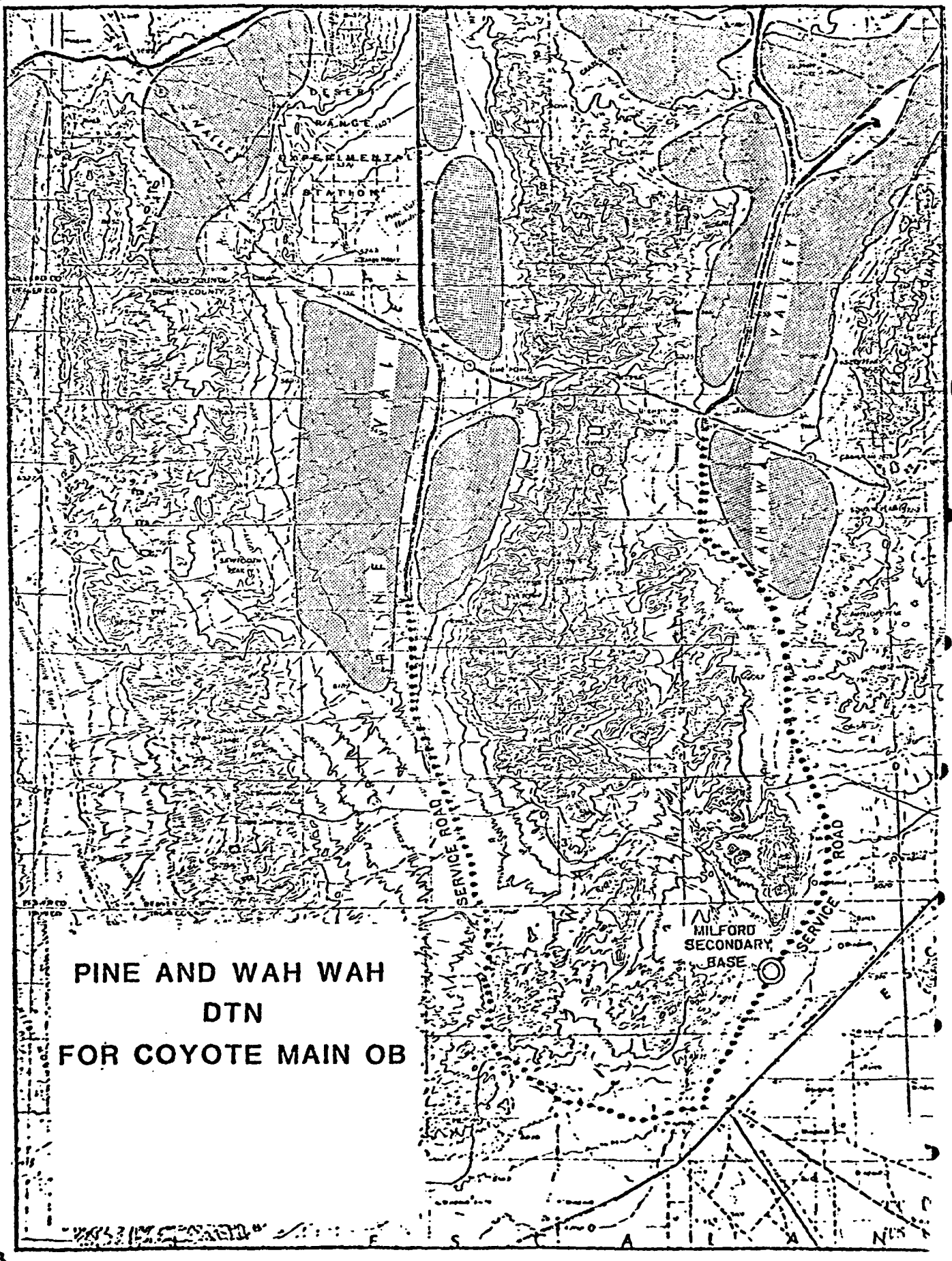
- MOUNTAIN PASSES (INTER-VALLEY ROADS)
  Grade, constructibility, distance

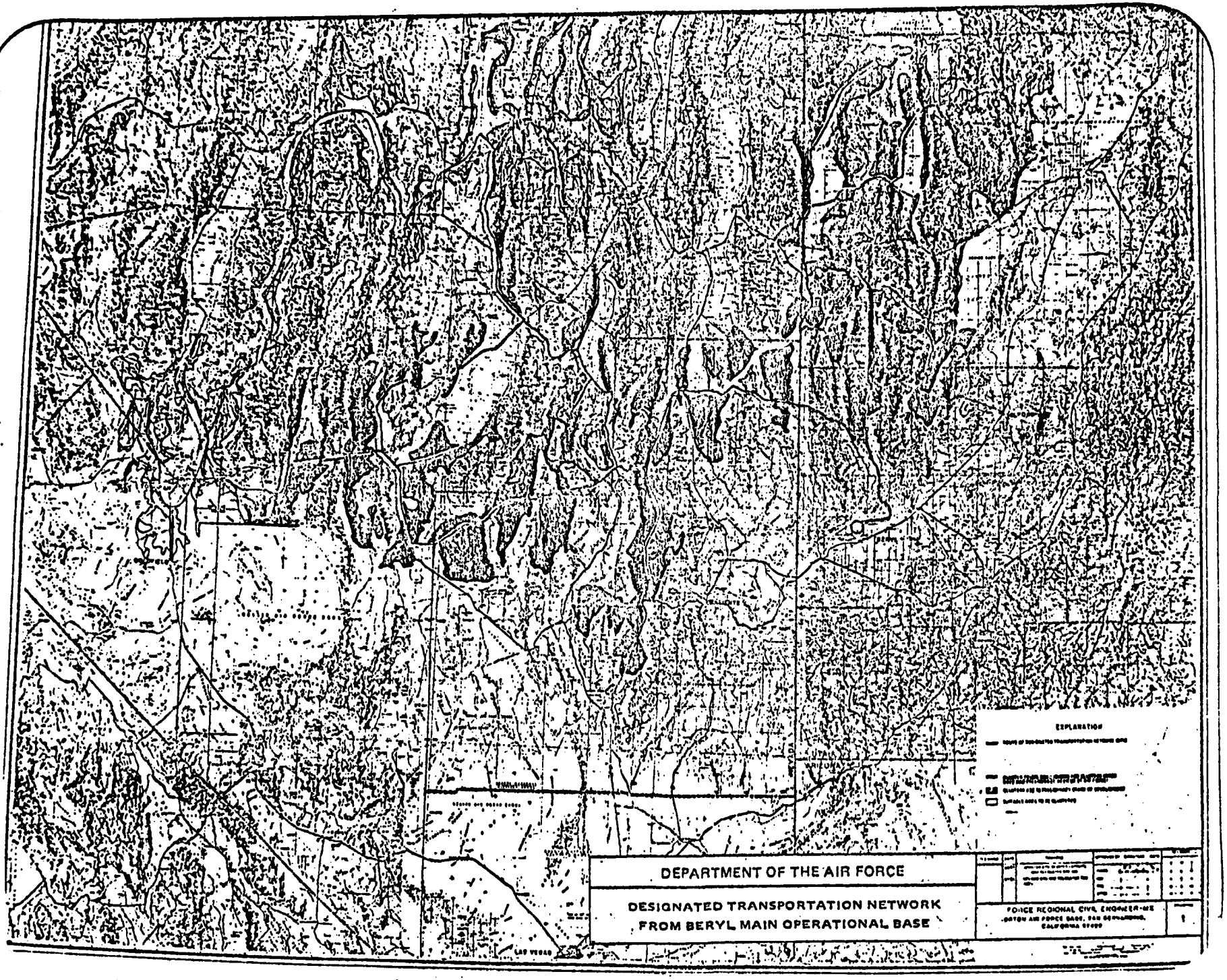
- LOCATION AND ORIENTATION OF CLUSTERS

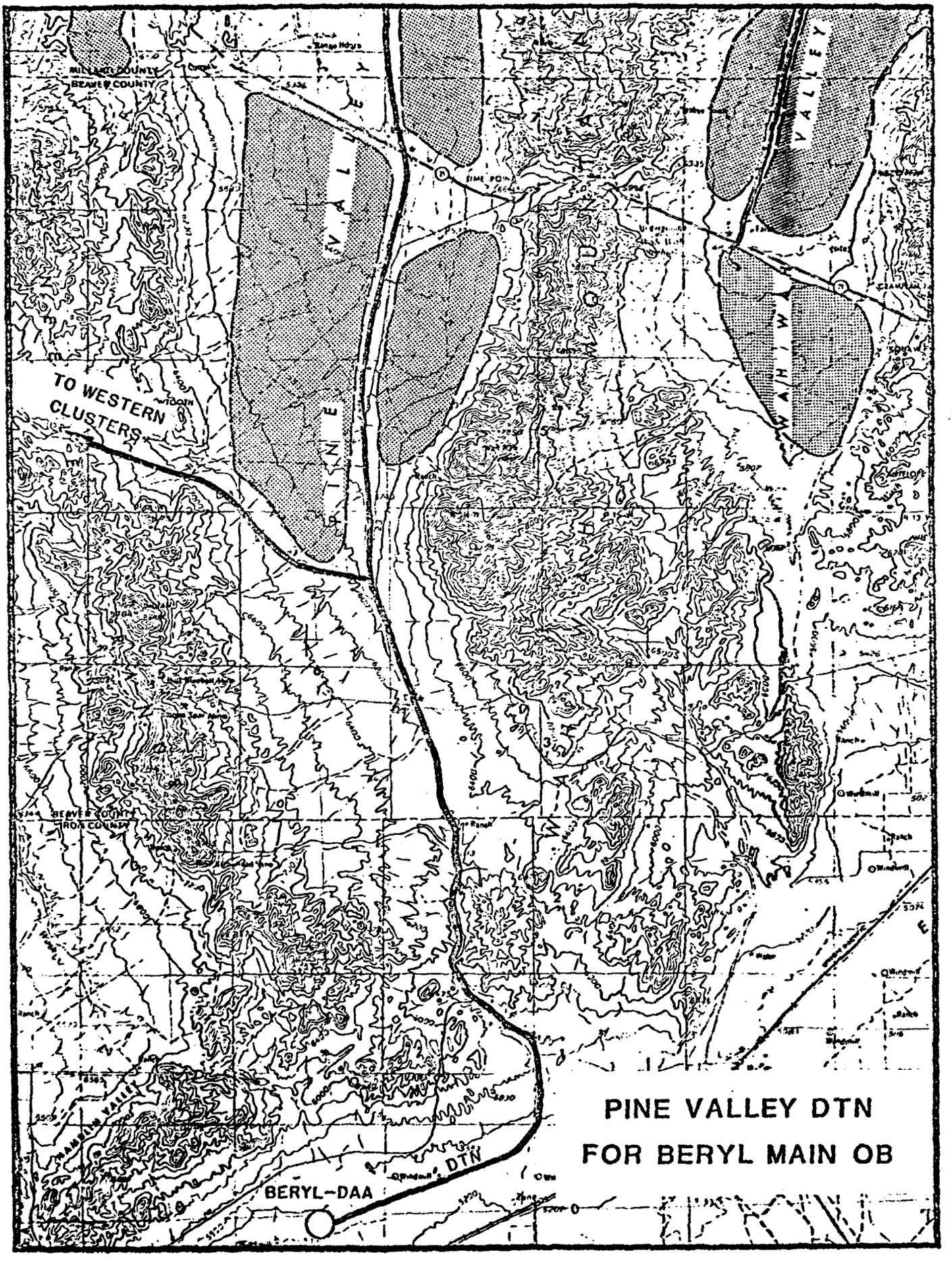
- GEOTECHNICAL CONDITIONS
  Playas, drainages, adverse terrain

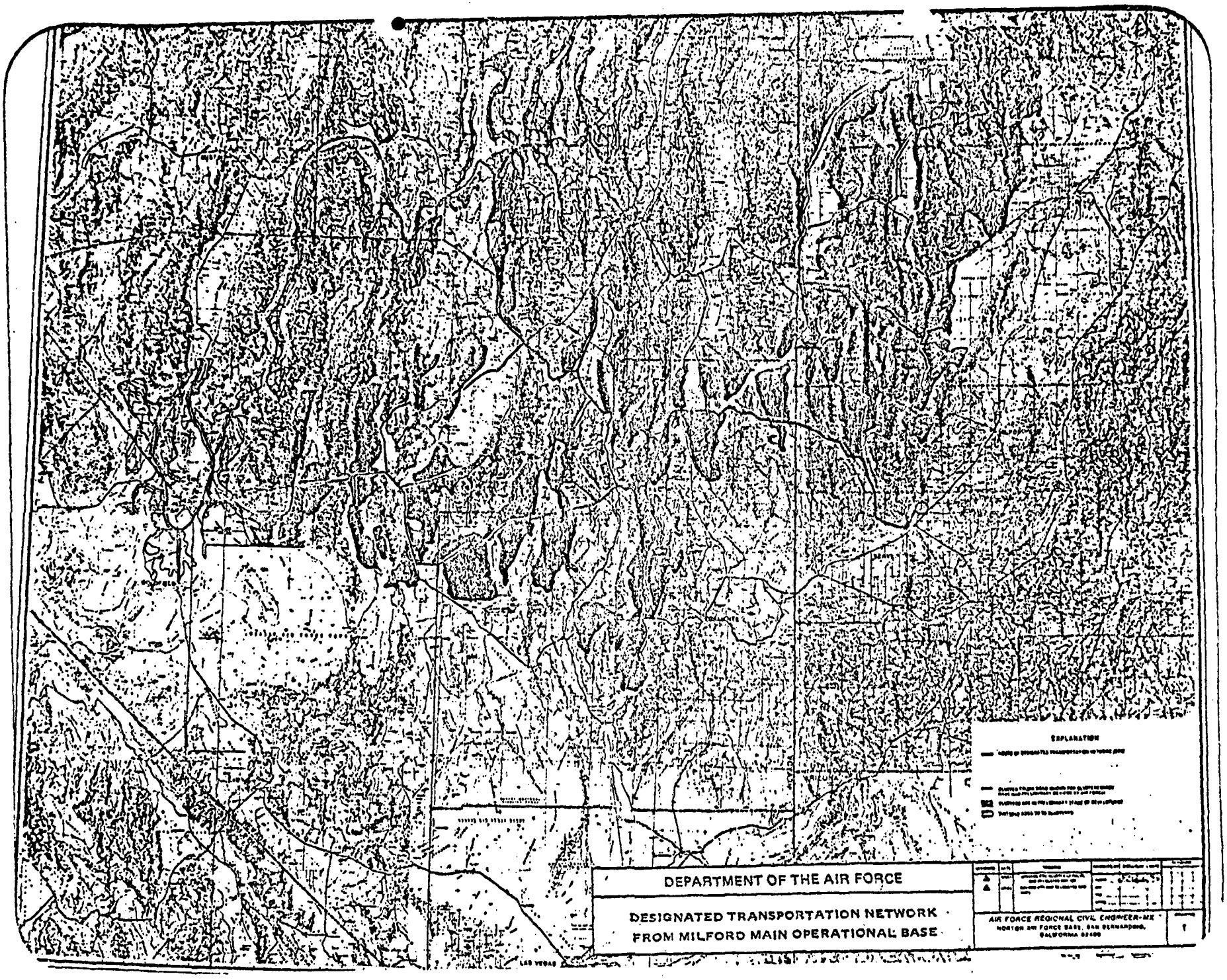
- CULTURAL / ENVIRONMENTAL
  Existing roads, structures, land use
  Environmentally sensitive areas
  EIS exclusions

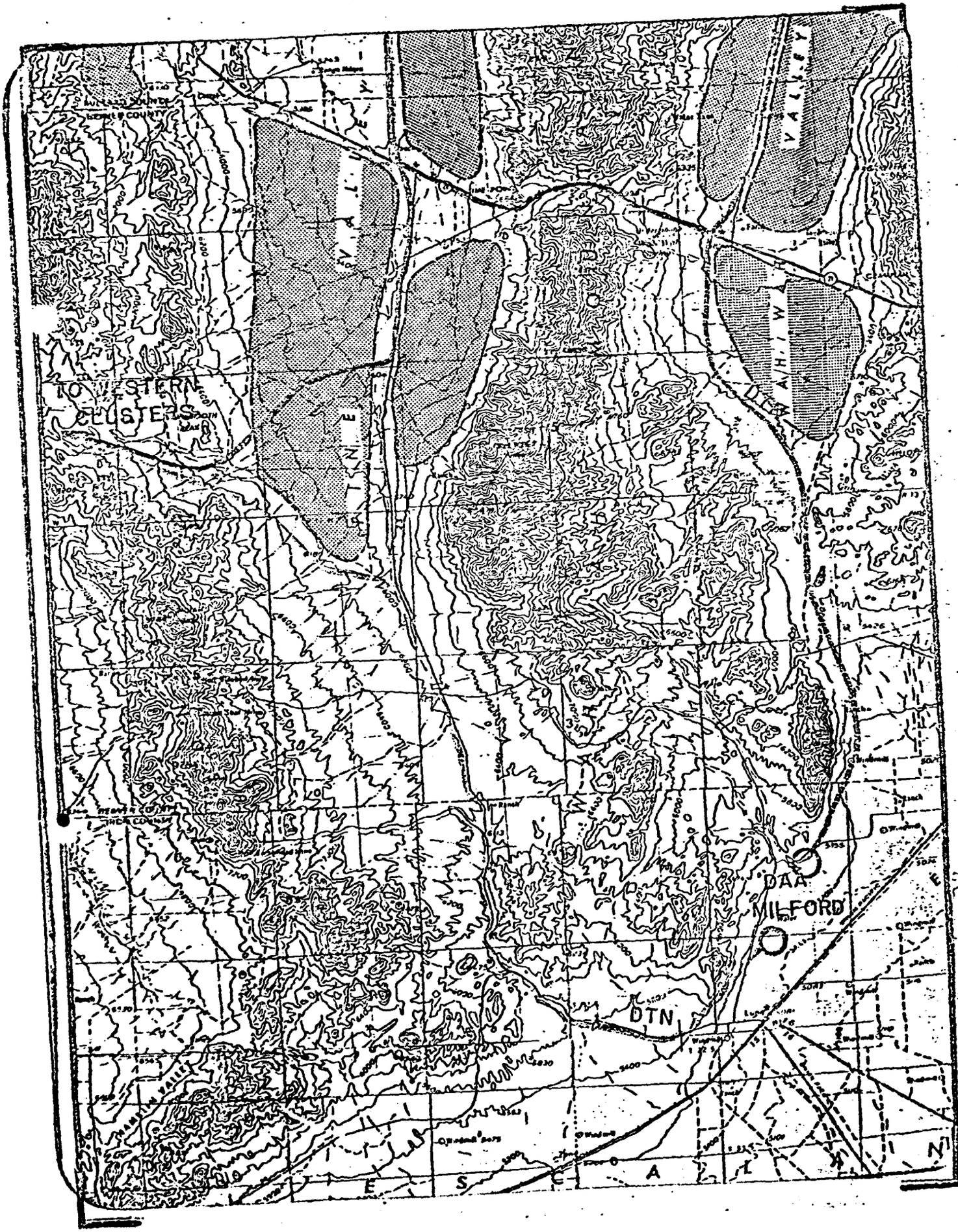

EXPLANATION
DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM COYOTE SPRING VALLEY
MAIN OPERATIONAL BASE
AIR FORCE REGIONAL CIVIL ENGINEER-WE

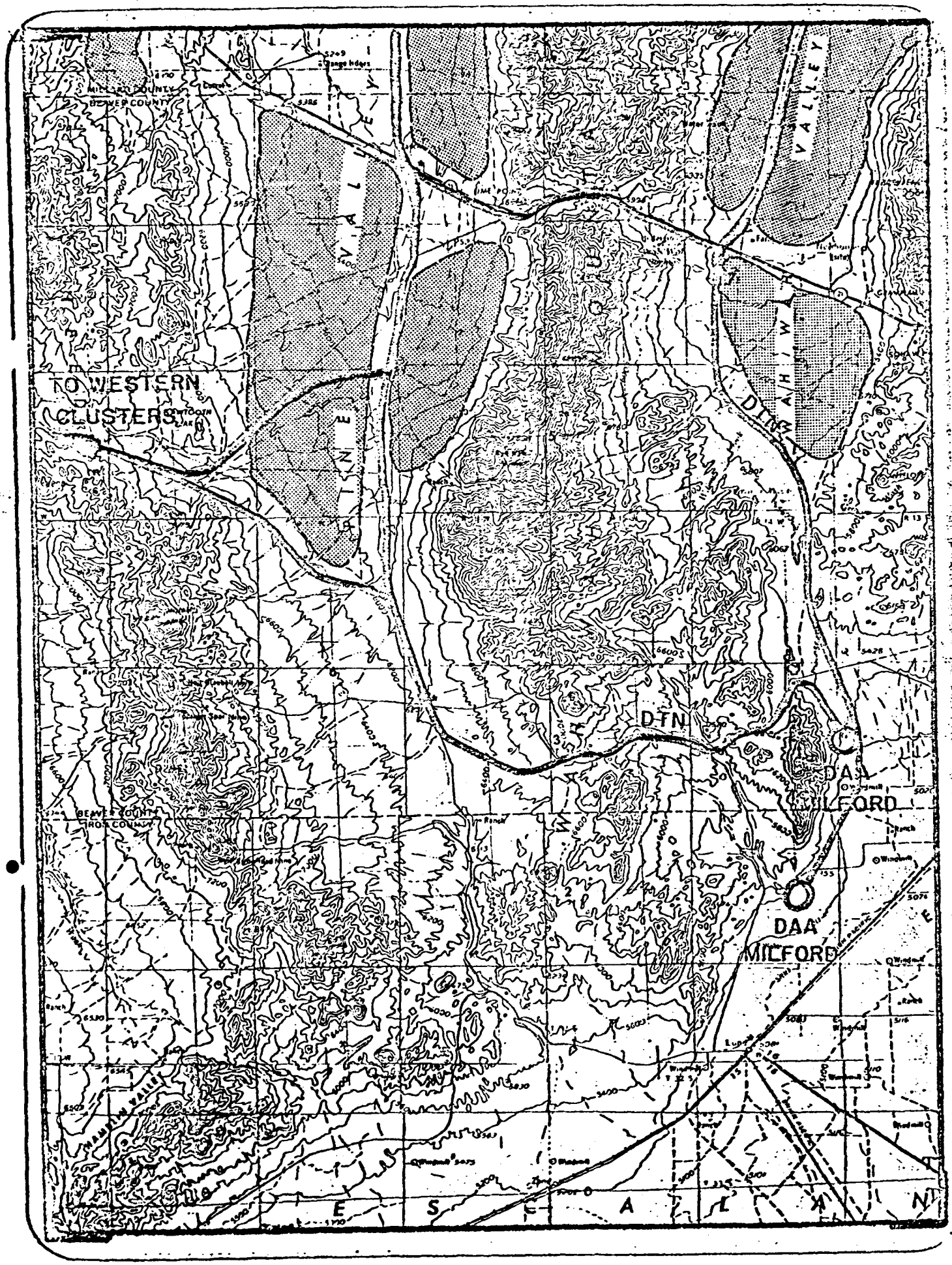

DESERT
RANGE
EXPERIMENTAL
STATION
WAH WAH VALLEY
SERVICE ROAD
SERVICE ROAD
SERVICE ROAD
MILFORD
SECONDARY
BASE
PINE AND WAH WAH
DTN
FOR COYOTE MAIN OB

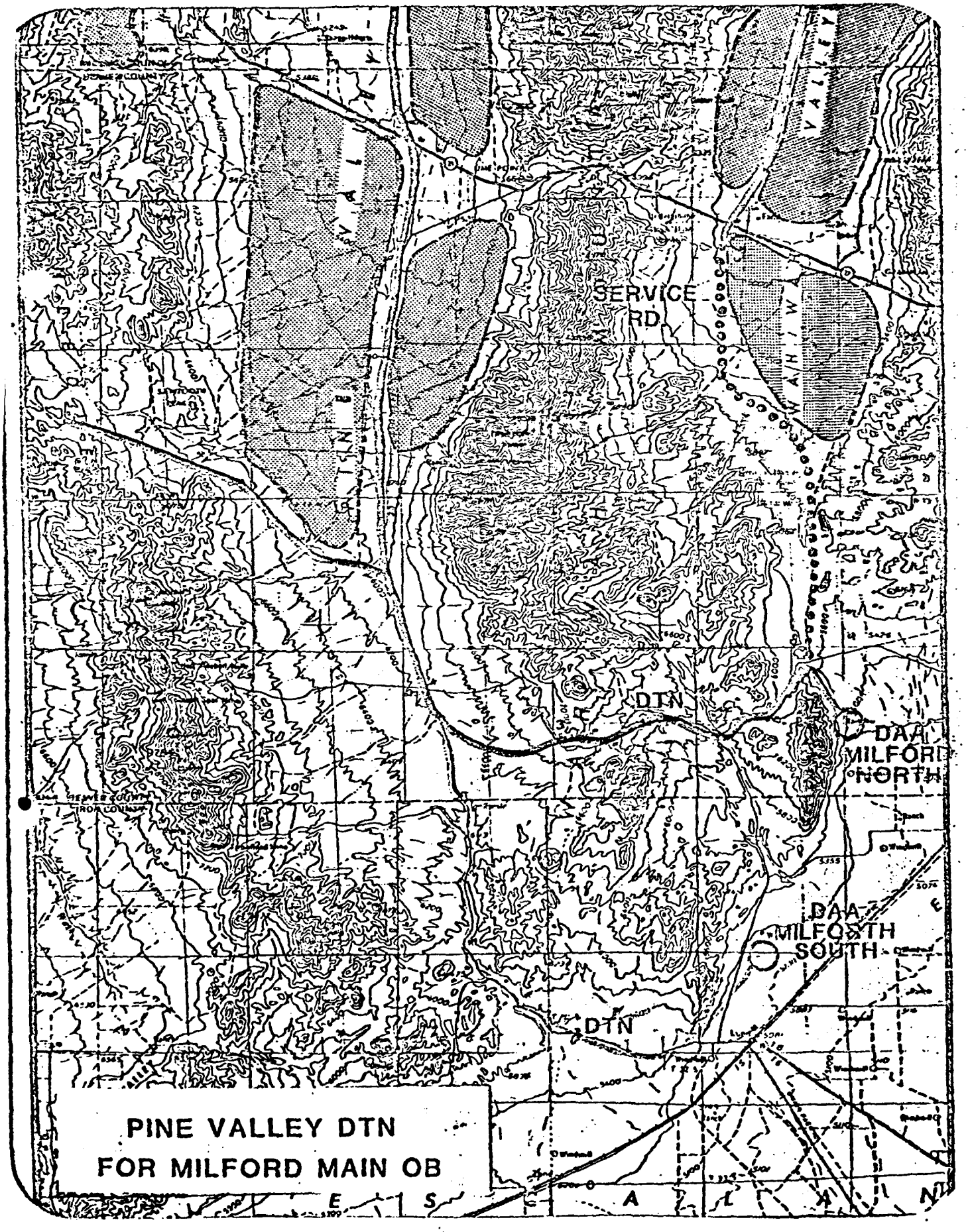

EXPLANATION
DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM BERYL MAIN OPERATIONAL BASE

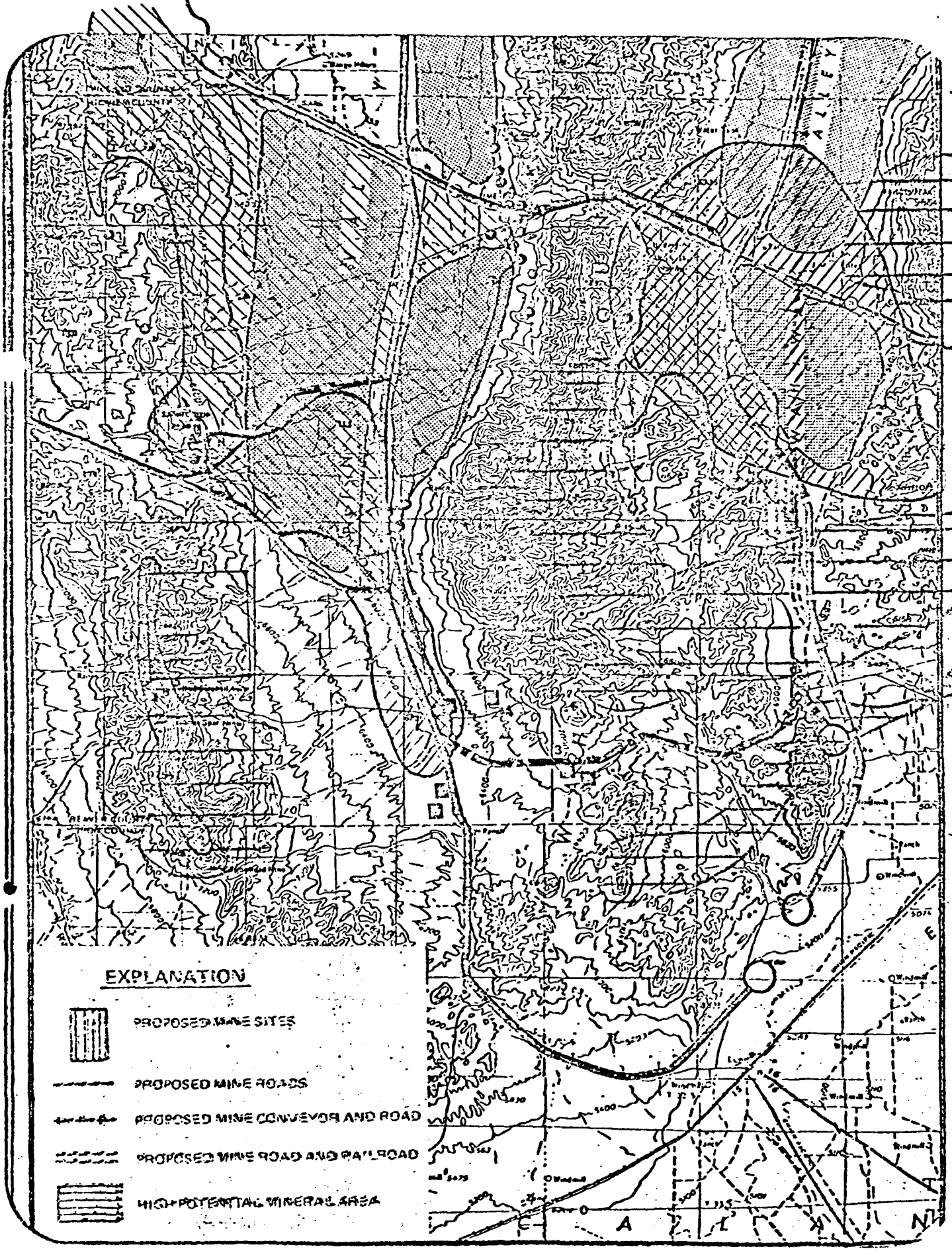

MILLARD COUNTY
BEAVER COUNTY
PINE VALLEY
SNAKE VALLEY
TIME POINT
TO WESTERN CLUSTERS
BEAVER COUNTY
IRON COUNTY
HAMLIN VALLEY
DTN
BERYL-DAA
PINE VALLEY DTN
FOR BERYL MAIN OB


EXPLANATION
DEPARTMENT OF THE AIR FORCE
DESIGNATED TRANSPORTATION NETWORK
FROM MILFORD MAIN OPERATIONAL BASE
AIR FORCE REGIONAL CIVIL ENGINEER-NX
NORTON AIR FORCE BASE, SAN BERNARDINO, CALIFORNIA 92409
LAS VEGAS


TO WESTERN
CLUSTERS
DAA
MILFORD
DTN
E S E
A
N


NO WESTERN CLUSTERS
DTN
DAA
MILFORD
DAA
MILFORD
DTN
VALLEY
BEAVER COUNTY
IRON COUNTY
MILLARD COUNTY
BEAVER COUNTY
E S F A L K N


SERVICE
RD
DTN
DAA
MILFORD
NORTH
DAA
MILFORD
SOUTH
DTN
PINE VALLEY DTN
FOR MILFORD MAIN OB


EXPLANATION
PROPOSED MINE SITES
PROPOSED MINE ROADS
PROPOSED MINE CONVEYOR AND ROAD
PROPOSED MINE ROAD AND RAILROAD
HIGH POTENTIAL MINERAL AREA

DTN OPTIONS MILFORD OB

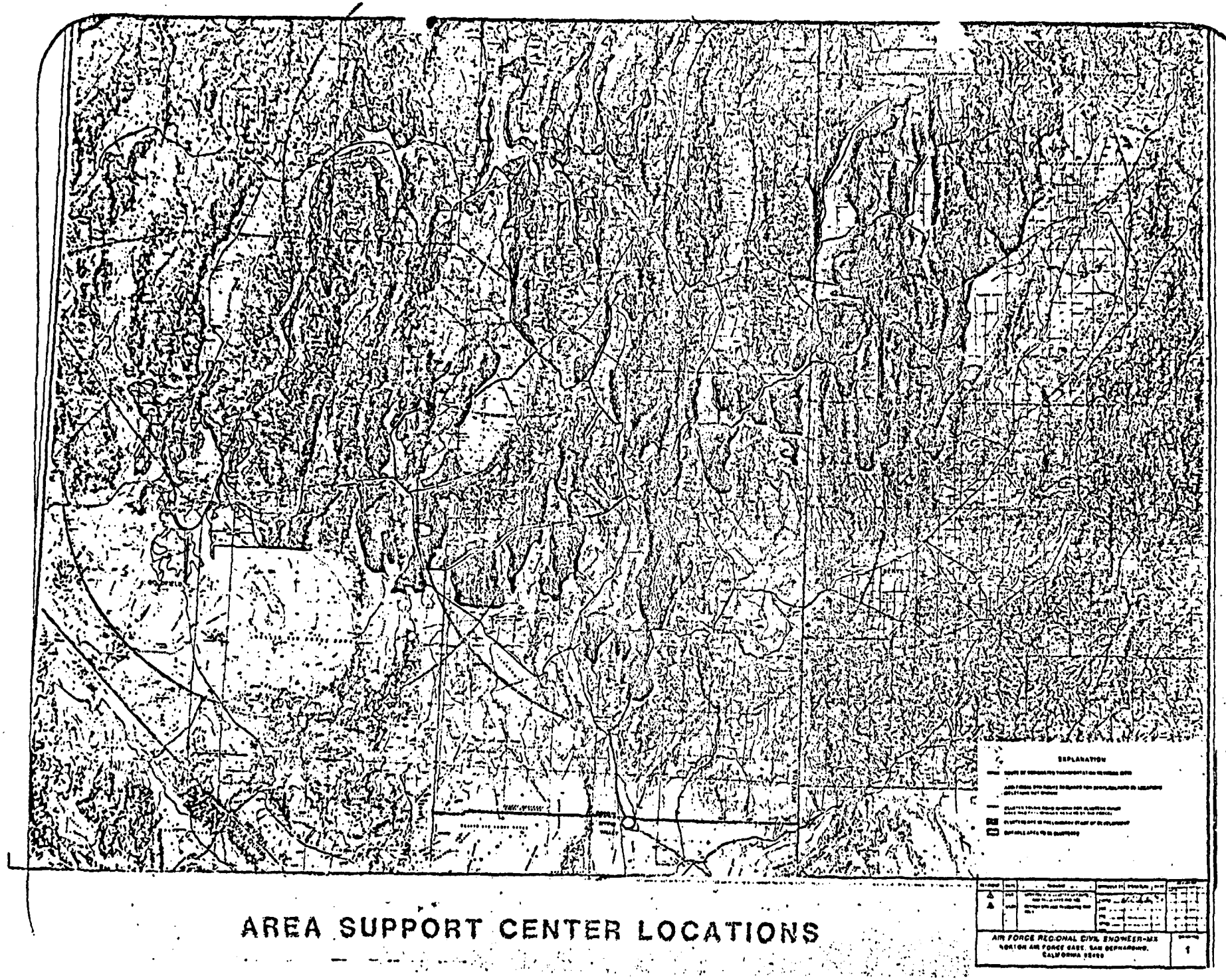
DTN OPTIONS (TULE ASC)	PRIMARY DTN CONSTRUCTION MILES	OPERATIONS MILES (CLUSTER MILES)	OTHER FACTORS				REMARKS
			MINING	CONSTRUCTION	BIOLOGICAL	COST PRELIMINARY ESTIMATION	
IA-PINE VALLEY	50	7900	LOW IMPACT	——	MODERATE IMPACT	$ 8.2 MIL.	MUST SELECT ROUTE FOR PRAIRIE DOG COMPATIBILITY
IC-WAH WAH VALLEY	62	10,200	HIGH IMPACT	CUT AND FILL FOR WAH WAH SUMMIT	LOW TO MODERATE IMPACT	$ 20.3 MIL.	WAH-WAH SUMMIT CO-EXISTENCE ISSUES AND GRADE PROBLEMS MUST BE RESOLVED
ID-JOCKEY ROAD PINE VALLEY	46	7100	MODERATE IMPACT	CUT AND FILL FOR JOCKEY ROAD	MODERATE IMPACT	——	MUST SELECT ROUTE FOR PRAIRIE DOG COMPATIBILITY

SUMMARY OF PINE VS WAH WAH OPTIONS

- CONSTRUCTION AND OPERATING COST FAVOR A PINE VALLEY OPTION
- BIOLOGICAL VS ECONOMIC RESOURCE TRADE-OFF —— REQUIRES MORE DATA
- ENVIRONMENTAL IMPACT APPEARS MANAGEABLE THRU MITIGATION MEASURES
- FINAL OB SITE REQUIRED

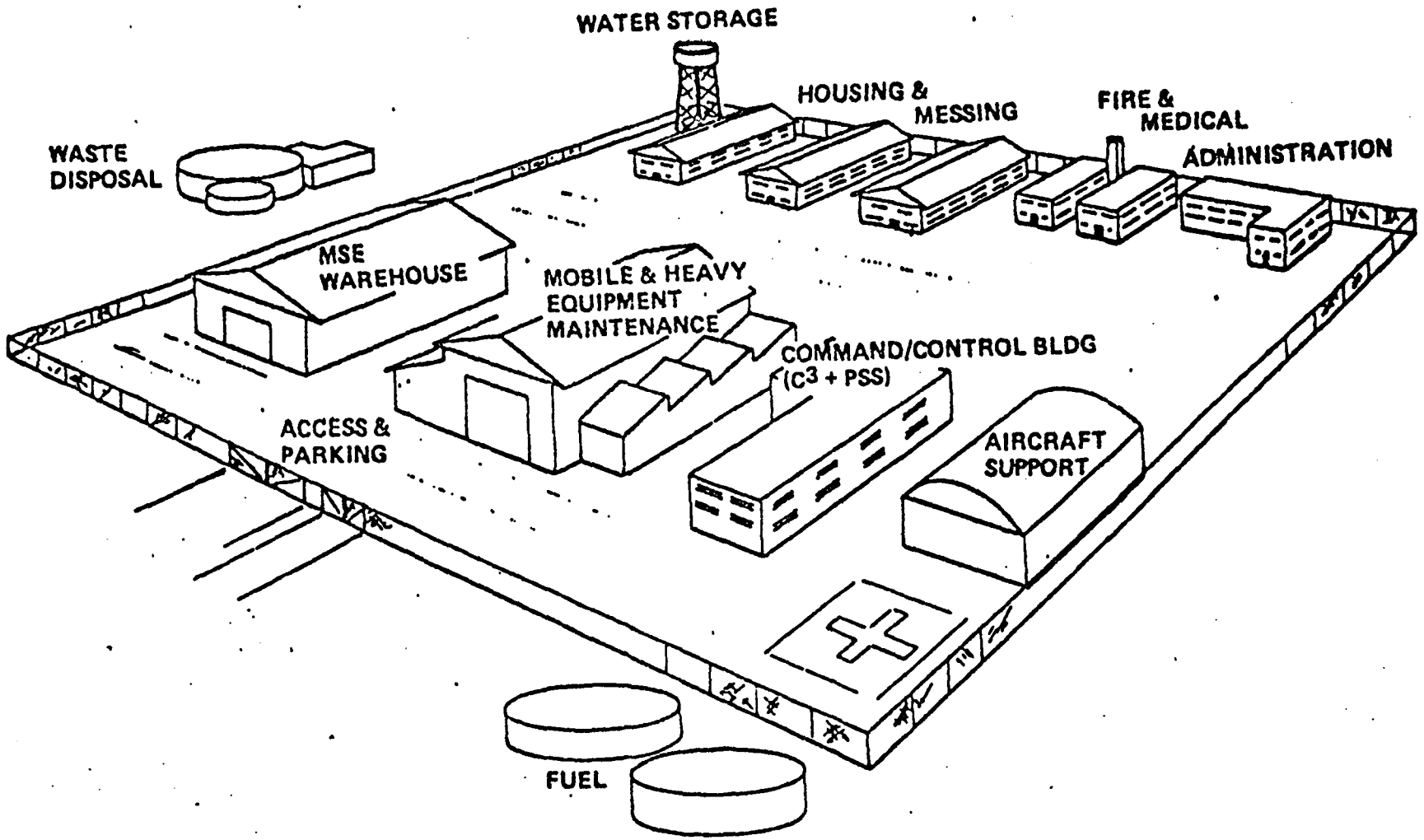
AREA SUPPORT CENTER (ASC)

- FUNCTIONS
  - SECURITY
  - MAINTENANCE
- FACILITIES
  - VEHICLES
  - HELICOPTERS
  - EQUIPMENT MAINTENANCE
  - STORAGE - PARTS AND EQUIPMENT
  - ACCOMODATIONS



AREA SUPPORT CENTER LOCATIONS

ASC CONCEPT


WATER STORAGE
HOUSING &
MESSING
FIRE &
MEDICAL
ADMINISTRATION
WASTE
DISPOSAL
MSE
WAREHOUSE
MOBILE & HEAVY
EQUIPMENT
MAINTENANCE
COMMAND/CONTROL BLDG
(C3 + PSS)
ACCESS &
PARKING
AIRCRAFT
SUPPORT
FUEL

AREA SUPPORT CENTER (ASC)
SITE SELECTION CRITERIA

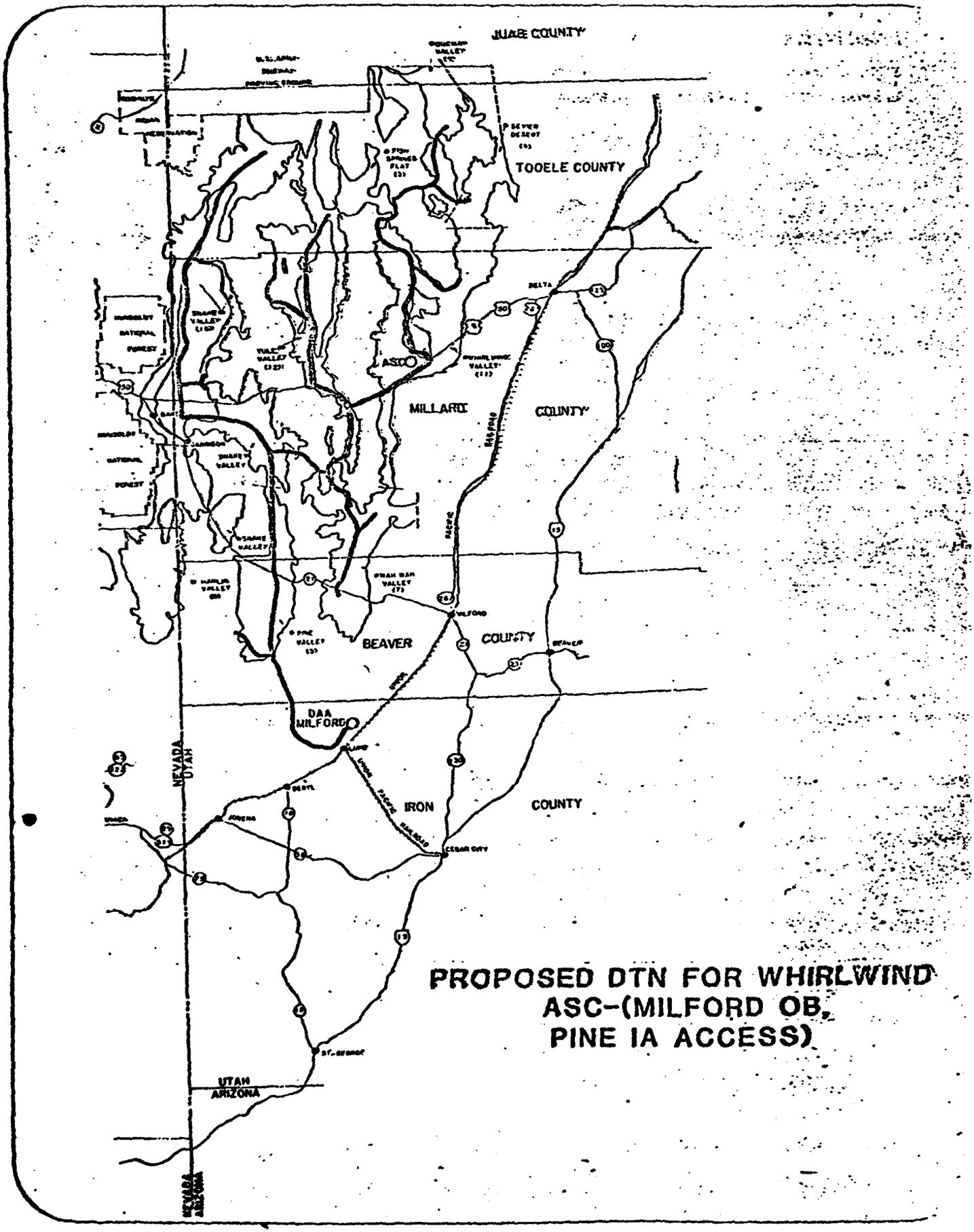
- SITE SUFFICIENT ASC'S TO SUPPORT A 200 CLUSTER SYSTEM WITH ABILITY TO ACCOMODATE CLUSTERS PRESENTLY OUTSIDE LIMITS OF EXISTING REGIONAL LAYOUT

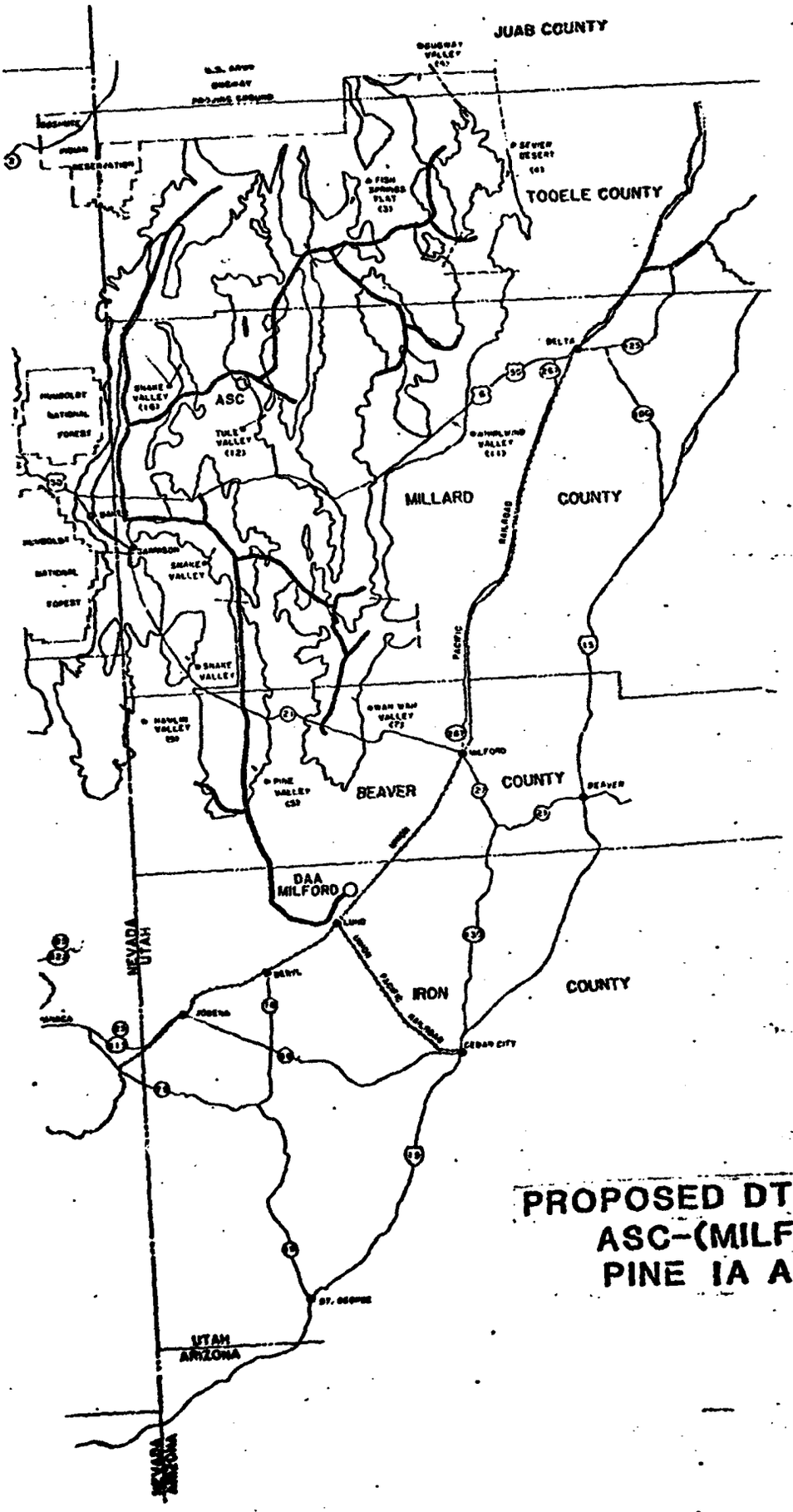
- EACH ASC TO SUPPORT MAXIMUM NUMBER OF CLUSTERS WITHIN A 65 STATUTE MILE RADIUS

- LOCATE ASC'S ALONG THE DESIGNATED TRANSPORTATION NETWORK (DTN)

- LOCATE ASC'S IN CLOSE PROXIMITY TO MAJOR HIGHWAYS AND OB OR LOCAL COMMUNITIES

- LOCATE ASC'S IN "SUITABLE" TERRAIN BUT WITHOUT LOSS OF SHELTER SITES


JUAB COUNTY
TOOELE COUNTY
ASCO
MILLARD
COUNTY
BEAVER
COUNTY
DAA
MILFORD
IRON
COUNTY
NEVADA
UTAH
UTAH
ARIZONA
NEVADA
ARIZONA
PROPOSED DTN FOR WHIRLWIND
ASC-(MILFORD OB,
PINE IA ACCESS)



PROPOSED DTN FOR TULE ASC-(MILFORD OB, PINE IA ACCESS)

TULE ASC

+ CENTRALLY LOCATED

+ CONSTRUCTION CAMP AT ASC VICINITY ZONE

+ CONSTRUCTION MILEAGE FAVORS TULE

+ EXCELLENT CLUSTER ACCESS

– DISTANCE FROM SUPPORT COMMUNITY

WHIRLWIND ASC

+ ALONG A MAIN HIGHWAY

+ CLOSE TO DELTA

– POOR CLUSTER ACCESS

? COEXISTENCE OF DTN WITH STATE HIGHWAY

ASC SUMMARY

- PRELIMINARY SITING FAVORS A TULE ASC

- NEED ADDITIONAL DATA / FURTHER STUDY
  - COEXISTANCE OF ROADS
  - PROXIMITY TO DELTA
  - ENVIRONMENTAL FACTORS
  - COMPLETION OF CLUSTERING
  - OB SELECTION

DEPARTMENT OF THE AIR FORCE
REGIONAL CIVIL ENGINEER - MX (AFESC)
NORTON AIR FORCE BASE, CA 92409

JUL 1 1981

29 JUN 1981

REPLY TO ATTN OF: DEV

SUBJECT: Corrections to Minutes of Siting Meetings

TO: Utah M-X Coordination Office
ATTN: Mr. Kenneth C. Olsen
448 E. 400 South, Suite 103
Salt Lake City UT 84111

1. We have reviewed the minutes prepared by your office following the siting meetings in Salt Lake City on 23 Apr 81, and in Milford on 15 May 81. Factual clarifications have been annotated on the attached copies.

2. Request significant corrections be added to minutes and furnished to the original distribution list.

William A. Verkest

WILLIAM A. VERKEST, Lt Colonel, USAF
Deputy Director
Environmental Planning Division

2 Atch
1. Corrected Minutes from 23 Apr Siting Meeting
2. Corrected Minutes from 15 May Siting Meeting

Cy to: HQ USAF RD-M(MXLO/Maj McMains)
Ertec Western (S. Madsen)
COE/SPKRE (M. Wheeler)
HDR (R. Tausch)

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Persons

FROM: Utah MX Coordination Office

DATE: May 13, 1981

SUBJECT: Air Force MX Siting Meeting

On April 23, 1981, an Air Force MX Siting Meeting was held in Room 303 of the State Capitol in Salt Lake City. A copy of the agenda, attendance list and handouts is attached. The discussion is summarized below.

Major Mike Elliott of the Air Force Regional Civil Engineer's Office (AFRCE-MX) began by stating that the Air Force had been working on the siting system for the past nine months and that it was finally beginning to fit together. The Air Force felt that they needed to do a better job of getting input from the state, local and private sector. This is a preliminary meeting, prior to the initiation of a formal siting review board, which would probably be holding its first meeting within a month.

The purpose of the meeting is to do a complete debriefing of what the Air Force and its contractors have done in Pine and Wah Wah Valleys, Utah. Stan Madsen of ERTEC explained that three valleys had been chosen: Dry Lake Valley, Nevada and Pine and Wah Wah Valleys, Utah for the purpose of having ten clusters operational by mid-1986, the Initial operating Capability (IOC) date. The Air Force has opted for ten cluster in Dry Lake Valley and five cluster each in Pine and Wah Wah Valleys.

One of the changes to the baseline system is that it has switched to ENVIRONMENTAL direct connect, which means that the cluster roads will go directly from one shelter to the next. ERTEC reported that their report on the IOC weapon system layout is in draft form, but it will be submitted to the Air Force very soon. Every time the Designated Transportation Network (DTN) is changed, the shelters ~~have to be modified.~~ Furthermore, there will have to be a ~~2,560 foot~~ standoff distance between power lines and any shelter.(1)

LOCATIONS MAY HAVE TO BE MODIFIED TO MAINTAIN SPACING REQUIREMENTS

(1) THE STANDOFF DISTANCE CAN RANGE FROM 750' TO 2500 FEET DEPENDING ON THE VOLTAGE OF THE POWER LINE.

The initial ~~weapon system~~ SHELTER layout for Way Wah Valley had to be changed to regroup cluster because of a DTN rerouting.

Before the surveyors began their work, a geotechnical and monument survey was done. After this process was completed, surveyors prepared legal descriptions and then reports. Since the question remained whether the ~~clusters~~ SITES were acceptable or not, a field review of the surveyed sites ensued. The siting review board will make a final decision on the acceptability of the sites at a later date. If a decision is made to change the site layout(s), then the process would be repeated.

ERTEC stated that ~~approximately~~ THE SURROUNDING 12 acres would be ~~disturbed~~ INVESTIGATED for each 2,5 acre shelter site.(1) The geotechnical factors affecting the shelter location are depth to rock and water - depths must be more than 50 feet. The BLM will be reviewing wildlife and botanical voucher collections. The Utah State Archeologist has visited the area. Resiting will be recommended so as not to disturb ~~isolated artifacts~~. A question was asked about the criteria used to determine resiting; ERTEC indicated the resiting criteria was in their report, which will be released to the Air Force next week. SIGNIFICANT SITES. ISOLATED ARTIFACTS ARE NOTED UNLESS CONSIDERED A SIGNIFICANT FIND. Biological resources were discussed. The BLM has given Air Force contractors biological data for the four operating base sites and the IOC valleys. The lists of protected species are subject to change, so the Air Force is taking into consideration all biological resources that may have protected status when the Air Force is actually in construction. ~~The majority of the biological work conducted to date has focused on plants. No sitings were recommended~~(2) It was pointed out that these studies were done only in one season (primarily winter), and it is generally not possible to determine what is happening during the other three seasons. the Air Froce stated that they were considering doing additional biological studies in other different seasons, especially spring. The Utah Division of Wildlife Resources stated that they would help the Air Force and their contractors determine the impacts in the long term; an environmental constraint analysis for Pine and Wah Wah Valleys has already been given to the Air Force.

The Air Force stated that HDR will be doing the Tier II environmental assessments.

A question was asked whether the Air Force would be holding a siting review meeting in southern Utah. The Air Force indicated that they would hold siting review meetings in Nevada and Utah, and they would repeat this meeting on May 15 in Milford, Utah. Further, the Air Force stated that if Nevada and Utah are selected for full basing, the Air Force will use the IOC shelter locations, since most of the sites are good (i.e., geotechnically and environmentally acceptable).

UNLESS ALTERNATE PROPOSALS ARE SUBMITTED DURING THE REVIEW PROCESS & IF NEVADA-UTAH SELECTED

The Air Force was asked about the status of cluster five in Pine Valley and what (if any) alternative solutions were/are being examined. Major Elliott stated that the decision has been made to proceed the land withdrawal requirements. The Air Force is aware that cluster five has a few problmes, but there may not be an easy way to solve them. The easy solution would be to

(1) THE 12 ACRES IS CONSIDERED MORE THAN SUFFICIENT TO COVER THE AREA THAT WOULD BE DISTURBED DURING CONSTRUCTION.

(2) THE MAJORITY OF THE BIOLOGICAL FINDINGS WERE SENSITIVE CACTUS SPECIES. 5 SUCH SITES IN PINE VALLEY WERE RECOMMENDED FOR RESITING IF MORE ACCEPTABLE LOCATIONS COULD BE IDENTIFIED [illegible] FOR RELOCATION UPON FIELD EXAMINATION.

move the cluster, but that may not be feasible for the Air Force taking everything into consideration.

Several questions were raised about the work that ERTEC is doing on shelter siting and its integration with DTN siting.

The State of Utah stated that the analysis and assessment of environmental resources in the siting process used by the Air Froce needs improvement. It seems that the analysis and assessment of geotechnical and engineering criteria is working well. The Air Force stated that the integration of environmental siting criteria is open for modification.

The Air Force indicated that after IOC valleys have been evaluated and approved using this process, all of the remaining deployment valleys will be handled in the same fashion. There will be an environmental assessment of impacts done on all of the other valleys. The Air Force said they have relied on the BLM to tell them how to do the environmental assessments as well as invited the BLM to tell them how to do the Tier I environmental impact statement for deployment area selection and land withdrawal/acquisition.

The Air Force was asked why the ranchers had not been given any consideration in the siting process. The ranchers had not been contacted by the Air Force as had been promised. Major Elliott stated that the Air Force is aware of the ranching problems and the ranchers' concerns had been taken into consideration in siting the weapon system; ~~clusters were moved because of Animal Unit Months (AUMs).~~ (1) The ranchers have asked the Air Force to map the white sage in Pine Valley and stay away form it in siting if at all possible. The Air Force is going to do the mapping but in all honesty may not be able to avoid the white sage.

Major Elliot stated that the Tier I environmental impact statement was supposed to address the differences in full or split basing the weapon system in Texas/New Mexico and Utah/Nevada. The other "tiered" environmental assessments will address vicinity zone and site-specific impacts. The meaning of "new impacts" was asked and Major Elliott replied that it probably meant different impacts, FROM THOSE ADDRESSED IN THE DEIS & FEIS.

It was mentioned that the prairie dog colonies will be avoided by a ~~one-mile~~ stand-off distance ~~for~~ from the DTN. (2) Some of the possible solutions to handling both the MX and wildlife are 1) to declare MX areas temporary wildlife areas, 2) to control firearms as well as other alternatives. Mitigation means a reduction in impacts, not necessarily an elimination of impacts.

(1) NO CLUSTERS HAVE BEEN MOVED BECAUSE OF AUM'S. PINE VALLEY CLUSTERING WAS REDUCED FROM 7 CLUSTERS INITIALLY TO THE CURRENT 5 CLUSTERS TO REDUCE OVERALL LOADING IN THE VALLEY.

(2) A ONE-MILE STAND OFF DISTANCE FOR PRAIRIE DOGS HAS BEEN USED AS A GOAL BY USAF SITING TEAMS, BUT NOT AS A REQUIREMENT. IN PINE VALLEY, THE USAF HAS BEEN ABLE TO AVOID MOST OF THE COLONIES BY OVER 1 MILE, HOWEVER THE NEAREST COLONY CAN ONLY BE AVOIDED BY 0.7 MILE. BOTH USAF AND USDOE ARE CONSIDERING OTHER MITIGATION OPTIONS E.G. TRANSPLANTING THE COLONY TO AN ALTERNATE LOCATION AT USAF EXPENSE, ETC.

AIR FORCE SITING MEETING

Room 303, State Capitol, Salt Lake City

1:00 - 5:00 p.m.

April 23, 1981

A G E N D A

I. Air Force Presentation of Pine and Wah Wah Valleys Environmental Assessments and Integration of Utah Environmental Data on These Valleys - Air Force

II. Discussion of Pine and Wah Wah Valleys Siting Problems - Open

III. Presentation of Alternative DTN Routings for Pine and Wah Wah Valleys, Transmittal of Maps and Solicitation of Input - Air Force

IV. Presentation of ASC Siting Near Delta, Transmittal of Maps and Solicitation of Input - Air Force

V. General Discussion of Beryl and Milford OB Siting

DTN = Designated Transportation Network

ASC = Area Support Center

OB = Operating Base

Please call 364-9647 to confirm your attendance. Please designate an alternative if you cannot attend.

ATTENDANCE LIST

MX SITING MEETING

APRIL 23, 1981

NAME	AGENCY	PHONE
JOHN ROACH	UTAH MX COORD. OFFICE	364-9647
Ken Greer	Ut. Dept of Ag	533-5421
Warless Southwick	Utah Dept of Health	533-6121
Dale Zabriskie	So Utah State College	534-5541
Jim Peacock	Utah Petroleum Assn	363-5757
C. Eugene Bigler	Division of Water Resources	533-5401
Jerry Olds	Division of Water Rights	533-6071
Ken RAVOUS	DIVISION OF PARKS & RECREATION	533 4492
STEVEN A. HUDSON	TRW/NAFB	(714) 382-3452
Mike McCloy	State Science Advisors office	533-4973
Ron Ostler	Utah Travel Council	328-8825
D.T. McMillan	Utah Geol. & Min. Survey	581-6831
ROY P. FULL	UTAH MINING ASSOC.	364-7077
Darrell H. Nish	Utah Wildlife Resources	533-9333
RUDY DROBNICK	UTAH WILDLIFE RESOURCES	533-9333
Lee Davis	Brush Wellman Inc.	467-5441
Ernest J. Eberhard	BLM - State Office	524-5811
EARL HINDLEY	" " "	" "
JOAN M. McCULLOUGH	UNION PACIFIC R.R.Co	363-1902
Robert S. Adams	union pacific RR Co	363 2236
William J. Tafuri	Getty Oil Co.	467-0671
Terry Covington	Phillips Petroleum	918-661-6791
R.C. Lenzer	Phillips Petroleum	364-208
DORAN PAGE	So. Ut. STATE COLLEGE	586-4401

Dave Conine	STATE TRANSPORTATION	
Gene Smrzenegger	Utah Dept. of Transp.	533-65
Howard Leatham	"	533-54
Sheldon W. McCorkle	"	533-52
Michael T. Moon	Milford Assoc. Inc.	268-5136
Lyn Keegan	Utah MX Coordination Office	364-9647
Linda Earle	"	"

NAME	AGENCY	PHONE #
Robert A. Rowley	Utah Dept. of Trans. Dist. 5	586-4491
Elyse Wall (Vice-Chairperson)	Paiute Indian Tribe of Utah	586-1111
Richard Jameson	coordinator Paiute Tribe of Utah	586-1111
Larry Kennings	EDAW, Inc.	415/392-9520
A. L. Clark	AFRCE-MX/DEVN	(714) 382-6400
Fred Snyder	Ertec Western	(213) 595-6611
Dennis Farley	Union Pacific R.R.	363-1454
Pete Wilkins	BLM Cedar City Dist.	586-2401
Chris Martinez	BLM New State Office	(702) 784-5602
Louis Krug	HDR	(805) 965-5214
Robert Thomson	HDR, Sciences	(805) 965-5214
Jim Rybach	Ertec Northwest	(206) 545-7303
Gail Thompson	Ertec Northwest	(206) 545-7303
Stanley Madsen	Ertec Western	(213) 595 6611
Duayne Lyles	Martin Marietta	303-977-0313
Marion Hunt	HQ USAF/RD/A Denver Office	(303) 388-1094
Maj Mike Elliott	AFRCE-MX/DEV	(714) 382-6[illegible]
Paul D. Baker	Martin Marietta	(303) 977-0[illegible]
Bob Stroud	TRW	(714) 382-3[illegible]

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 354-9547

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Parties

FROM: Utah MX Coordination Office

DATE: June 9, 1981

SUBJECT: Air Force Meetings on Ranching and MX Weapon System Siting

On May 15, 1981 two meetings were held in the Milford High School Auditorium in Milford, Utah. The first meeting was an informal discussion with ranchers and the second meeting dealt with siting of the MX weapon system. There was no written agenda for the first meeting; the agenda for the second meeting is attached. Attendance lists were not taken for either meeting. Air Force representatives included: Major Mike Elliott of AFRCE-MX/DEVC who coordinates MX weapon system siting; Morgan Wheeler of the Sacramento District Corps of Engineers, who is responsible for real estate acquisition; Dr. Robin Tausch of Henningson, Durham and Richardson (HDR) who is involved with range/ranching studies; Stan Madsen of ERTEC ~~National~~ who is the ERTEC MX Project Director; ENVIRONMENTAL Dr. Jim Mangi of ERTEC Northwest who coordinates ~~siting resource clearances;~~ ACTIVITIES. Dr. Gayle Thompson of ERTEC Northwest who is responsible for ~~siting~~ cultural resources ~~clearances~~; and Fred Snider of ERTEC ~~National~~ who is involved with DTN routing. The discussions are summarized below. WESTERN, INC.

Ranching Meeting

This meeting was an informal, open, question-and-answer session held during the morning. Major Elliott began with introductions of the Air Force representatives. He then discussed the status of the MX program, the MX Draft Environmental Impact Statement (DEIS) and the ~~30,000~~ 3,000 or-so comments on it gathered at the public hearings or submitted in writing. The MX DEIS comments are currently being catalogued and incorporated into the MX FEIS. Presidential decisions on the basing mode and deployment area (the main operating base site and the Initial Operating Capability (IOC) valleys) will be made in the late Summer. Subsequently a land withdrawal application will be submitted in the Fall to the Bureau of Land Management (BLM) and the states; it will identify the parcels of land to be withdrawn. The BLM will review the land withdrawal application in about four to six months, and will then submit a departmental recommendation (along with the review and the application) to the ~~Subcommittee on Public Lands.~~ TO THE CONGRESS. ONE OF THE KEY COMMITTEES TO REVIEW THE WITHDRAWAL IS THE HOUSE SUB-COMMITTEE ON PUBLIC LANDS Construction will not begin before the Spring of 1982 (i.e., until Congress approves the application and withdraws the land) and would be at the selected main operating base site.

Then a general discussion of ranching impacts began. The MX DEIS estimated that there would be a one percent loss of animal unit months (AUMs) after construction, but there would be a considerably greater AUM loss during construction due to range disturbance, road kills and the like. Robin Tausch indicated that the range and ranching analysis is being done on an allotment-by-allotment basis using range disturbance estimates of 100-foot roadway widths and ten acres per shelter. Under these assumptions, the range losses are approximately 40 acres per allotment. He indicated that individual operators were not visited to verify the data, assumptions or methodology used in this analysis. Robin Tausch also discussed the worst case analysis HDR has conducted, which assumes range disturbance within one half mile of all facilities.(1) For example, in Pine Valley a 29 percent range loss was estimated due to construction only. The deployment area valleys were ranked according to severity of range impacts and of the top six, four were in Utah (and included Pine and Wah Wah Valleys), and two were in Nevada. The worst case analysis included the cluster roads (unpaved) and the designated transportation network (paved DTN). Estimates of revegetation time requirements and success rates are not certain.

The question-and-answer session then opened. It was stated that it would take approximately eight to ten years to revegetate after construction or disturbance occurred, assuming effective exclusion of livestock from disturbed areas (by fencing or other means). The effectiveness of revegetation measures cannot be fully assessed. Morgan Wheeler said that the burden of livestock restraint will be on the contractors and not the ranchers; based on Corps experience with other construction projects, cattle and sheep can coexist with construction activities.

Clair Accord mentioned that the Air Force needs to consider (but has not, so far) the socio-economic impacts of deployment, particularly with regard to agricultural labor availability and wage rates. It is conceivable that the project will bid away both hired hands and the rancher operators. The Corps of Engineers said that they can compensate ranchers for increases in operating costs.

John Wintch said the one percent loss of AUMs after construction is unrealistic. The secondary impacts of MX deployment could and probably would result in uneconomic ranch operations. Morgan Wheeler said that the one percent range loss is only a measure of direct construction impacts. John Wintch suggested that ranchers be given the option of being bought out. The Corps of Engineers could only do this if the land withdrawal legislation gives them enough latitude to compensate large secondary impacts -- in the past, the Corps of Engineers has been unable to provide any measurable compensation for secondary impacts or losses.

Randy Parker said that the one percent direct AUM loss could quite easily be a ranch operator's profit margin. If this is so, the operation would be uneconomic. HDR and the Corps of Engineers concurred with these statements.

A rancher questioned what the policy is with regard to water pipelines. The Corps of Engineers said that they need to know the location of all existing water pipelines and as much as possible about proposed ones. At this stage, it is relatively easy to make appropriate design allowances for pipelines at little cost. After construction, the Air Force will decide who will pay for the modification/installation, but based on past experience with other large construction projects, the ranch operator will probably have to bear the expense (OF NEW FACILITIES AFTER MX CONST

(1) THIS IS BASED ON THE ASSUMPTION THAT CATTLE WILL NOT GRAZE WITHIN 1/2 MILE OF ANY CONSTRUCTION ACTIVITY, EVEN THOUGH FENCING, ETC. WILL PERMIT GRAZING MUCH CLOSER. APPLYING THIS 1/2 MILE BUFFER TO ALL PINE VALLEY FACILITIES RESULTS IN A WORST CASE LOSS OF 29% OF

Another rancher asked what the policy would be with regard to roads crossing fences. Morgan Wheeler answered that cattle guards would probably be used. This raised a question about the ability of cattle guards to support the missile transport vehicles. Both the Corps of Engineers and the Air Force indicated that they did not think this would be a problem.

A rancher wanted to know who would determine calf/lamb losses and compensation for the estimated losses. The Corps of Engineers will negotiate both losses and compensation with the individual ranchers. Losses will be determined using the historical experiences of the rancher(s) in question, as well as other ranchers in the vicinity.

John Wintch asked what measures are actively being investigated to mitigate AUM loss. Dr. Robin Tausch indicated that HDR is looking into mitigation but that nothing much is being done. HDR is open to suggestions from the ranchers.

A rancher mentioned that range disturbance would enhance infestation of the area by noxious weeds or exotic plants. HDR recognizes the problem, but does not have an answer.

A miner then discussed his experiences with missile construction in North Dakota, Montana and Hawaii. He said that a one percent AUM loss after construction is accurate, presuming revegetation is successful. In his experience, the federal government took care of the people who had to put up with construction. Dr. Robin Tausch said that the Great Basin is ecologically sensitive, and not comparable to these other areas. The Corps of Engineers has done work in Montana, and there were impacts and problems there. Every construction project has to stand on its own merits. Morgan Wheeler reiterated that the one percent AUM loss is a direct construction loss only; indirect losses would include increased operating costs, road kills, etc.

Another rancher said there should be an up-front commitment to revegetation before construction begins. The one percent AUM loss represents about 60,000 AUMs across 160,000 acres.

Mike Elliott said that defining or estimating impacts is not enough; mitigation must be looked at as well. He asked the ranchers for their ideas on how to equitably mitigate impacts.

Dr. Robin Tausch indicated that the latest ranching/range analysis to be undertaken by HDR focuses on individual operators and will be a large study. The Air Force indicated that General McCarthy has explicitly stated that there will be no net AUM loss;(2) the Corps of Engineers qualified this by asking everyone to note that the Air Force (and not the Corps) had made the statement.

A miner stated that the reclamation done at Colestrip, Montana has made the area better than it was before strip mining was begun.

Clair Accord stated that it was imperative for ranchers to begin collecting the appropriate financial/operations data now. The ranchers need to build a history that describes, on an annual basis: yields per acre, lambing/calving rates and losses, theft and vandalism losses, ranch improvements by type and cost, etc.

(2) NET LOSS MEANS IN THIS CASE, THAT RANCHERS WILL BE COMPENSATED FOR DIRECT LOSSES IN AUM'S THRU MONETARY COMPENSATION, RESEEDINGS, ETC. SO THAT THE NET EFFECT IS AS IF THERE WAS NO NET LOSS IN AUM'S.

Income tax returns, as well as other records, should be used. The Corps of Engineers emphasized that the ranchers need to keep track of such things as gates being left open, off-road vehicle traffic, etc., as well.

A rancher asked how theft and vandalism losses would be compensated. Morgan Wheeler answered that legally, inconsequential damages could not be compensated unless Congress directed that they be. Compensation would be worked out on a rancher-by-rancher basis, assuming Congress authorized such compensation. Major Elliott said that there will not be compensation for unforeseen losses. Therefore, it is imperative that the ranchers have demonstrable losses based on their records. The Corps of Engineers can only compensate for what they are legally mandated to do. Another rancher mentioned impact monies, which Morgan Wheeler said Congress would appropriate to affected counties and communities.

One of the miners asked if the session could focus on some questions and answers regarding mining activities. Major Elliott mentioned that the April 23rd meeting in Salt Lake City was held to discuss the environmental and cultural impacts of weapon system siting. He also mentioned a $55,000 proposal to study and map a sage grouse lek in Pine Valley. However, he was here today to talk with ranchers and miners.

ERTEC conducted a mineral survey of the Great Basin Desert. The Air Force then adopted a policy of avoiding high potential mineral areas in siting the weapon system. The Air Force realizes that there will be impacts to mining operations during construction, but after construction, the MX weapon system and mining will be compatible.

A miner asked about economic impacts to existing operation and compensation. Morgan Wheeler said that oil and gas leases will be subordinated where MX facilities are located. However, individual or specific compensation cannot be estimated because facility sites are not final; nevertheless, lessors will be compensated. The Corps of Engineers will appraise the value of the mineral estate to compensate minerals claimants. Also, the Corps of Engineers said that grazing compensation will be for perpetuity.

Randy Parker asked why the salt flats were not considered as a suitable area for deploying the MX. A miner conjectured that the high heat would be a problem. Major Elliott said that this was probably not the case, but was not sure why the area was not under active consideration.

A rancher asked about the widths of the DTN and cluster roads. The Air Force indicated the widths would be between 12 and 24 feet. The Air Force will attempt to control off-road vehicle access, realizing that this will conflict with the open access policy of the Air Force.

Another rancher raised a question about valley use. Major Elliott said that construction activities will be phased so that construction will not be going on in all valleys simultaneously.

A rancher asked what the timetable was for construction in Beaver County. The Air Force said that if the Milford site was chosen for the main operating base (MOB), construction would begin in the Spring of 1982 at the Milford site for the MOB, and in 1983 ~~in Wah Wah Valley~~ and 1984 ~~in Pine Valley~~ for the weapon system.
VALLEY ROADS CLUSTER ROADS AND SHELTERS

Another rancher asked about reducing the overall size of the weapon system. Major Elliott mentioned that valley clustering is one of the options for reducing the size of the deployment area that is under consideration. This would enable the Air Force to use odd-sized parcels of land (e.g., that could site 13 instead of 23 shelters). The cluster roads would be directly connected to the shelters and there would be no barriers between clusters but there would be between valleys. The missiles in a valley could be shuffled among any of the shelters (e.g., 10 missiles could be shuffled among 230 shelters, as opposed to one missile being shuffled among only 23 shelters).

Vern Wood asked about the Air Force's criterion of 50 feet to bedrock. The Air Force rationale for this criterion are: 1) shelter hardness, and 2) ease of construction. However, the Air Force said they would re-examine the outline of 50 feet to bedrock for Pine and Wah Wah Valleys. Stan Madsen said the 50-foot rockline contour for 10,000 square miles was a best professional judgment based on five to seven borings drilled in every valley, seismic lines and geologic maps which were constrained by the field investigation contract dollars available. If more field work is conducted, the contour can be refined. However, in Pine Valley for example, the western edge of the valley is bounded by volcanic rock and the eastern side has adverse terrain or slopes greater than 10 to 15 percent.

Siting Meeting

Major Elliott introduced the Air Force representatives (the same as for the ranching meeting). He opened with a cartoon, and then gave an MX system description. He discussed the MX decision process: the Townes Committee who will make a basing mode recommendation to the Secretary of Defense, who will make a basing mode recommendation to President Reagan, who will make the basing mode decision about July, and a deployment area decision this Fall. Further, the Air Force is committed to the policy of open access within the deployment area.

The Air Force process of land withdrawal and acquisition was then discussed in detail. The IOC shelter and cluster maintenance facility (CMF) sites will be surveyed on the ground, while the remaining FOC shelters sites and CMFs will be simple, protracted line drawings that will be unsurveyed. The surveyed and protracted maps will be forwarded to the BLM, who will review them and send a report and recommendation to the Secretary of the Interior, who in turn will make a recommendation to the Subcommittee on Public Lands. Congress will withdraw the land through legislation.

Then, the weapon system siting process was discussed. First, within the perimeter of the candidate deployment areas, geotechnically-suitable areas are delineated. Then, using environmental data collected by HDR and other consultants, environmentally sitable areas are defined. Using the geotechnically suitable and environmentally sitable areas, MX weapon system site layouts are drafted at a scale of 1:62500. These draft renderings undergo internal site review and protracted legal descriptions are developed. Detailed site layouts are then drafted at a scale of 1:9600. These drawings are given to the Corps of Engineers for detailed design at the same time that on-the-ground surveying and environmental reviews are being conducted at the sites. These data are analyzed, there is another site review, and if a re-siting occurs, the 1:9600 process repeats itself. After an acceptable 1:9600 site layout is derived from the

iterative process, surveyed legal descriptions are prepared and environmental assessments are prepared. These data will be transmitted to the BLM where they will be reviewed. Presuming everything is in order, the BLM will release the land to the Air Force and Corps of Engineers (the construction agent for the Air Force).

The Siting Review Board was briefly mentioned. The Board will review and make recommendations on the siting or re-siting of specific MX weapon system facilities.

[Mike Elliott stated that the Air Force had been working on weapon system siting for the past nine months and that it was finally beginning to fit together. The Air Force felt that they needed to do a better job of getting input from the state, local and private sector.] FROM 13 APRIL MEETING MINUTES

The purpose of the meeting was to do a complete debriefing of what the Air Force and its contractors have done in Pine and Wah Wah Valleys, Utah. Stan Madsen of ERTEC explained that three valleys have been chosen (Dry Lake Valley, Nevada, and Pine and Wah Wah Valleys, Utah) for the purpose of having ten clusters operational by mid-1986, the IOC date. The Air Force has opted for ten clusters in Dry Lake Valley and five clusters each in Pine and Wah Wah Valleys.

One of the changes to the baseline weapon system is that it has switched to direct connect, which means that the cluster roads will go directly from one shelter to the next. ERTEC said that their report on the IOC weapon system layouts is in draft form, but it will be submitted to the Air Force very soon. Every time the DTN is changed, the shelters have to be modified. Furthermore, there will have to be a 2,500 foot stand-off distance between power lines and any shelter. The initial weapon system layout for Wah Wah Valley had to be changed to regroup a cluster because of a DTN re-routing. * SIGNIFICANT DTN CHANGES

Before the surveyors began their work, a geotechnical and monument survey was done. After this process was completed, surveyors prepared legal descriptions and then reports. Since the question remained whether the clusters were acceptable or not, a field review of the surveyed sites was conducted. If a decision is made to change the site layout(s), then the process would be repeated.

ERTEC stated that approximately 12 acres would be ENVIRONMENTALLY CLEARED disturbed for each 2.5-acre shelter site. The geotechnical factors affecting the shelter location are depth to rock and water -- depths must be more than 50 feet. The BLM will be reviewing wildlife and botanical voucher collections. The Utah State Archeologist has visited the area. Re-siting will be recommended so as not to disturb ~~isolated artifacts~~ SIGNIFICANT FINDS. A question was asked about the criteria used to determine re-siting; ERTEC indicated the re-siting criteria was in their report, which will be released to the Air Force next week.

Biological resources were then discussed. The BLM has given Air Force contractors biological data for the four operating base sites and the IOC valleys. The lists of protected species are subject to change, so the Air Force is taking into consideration all biological resources that may have protected status when the Air Force is actually in construction.(3) [The majority of the biological work conducted to date has focused on plants. No re-sitings were recommended.] The Air Force stated that they were considering doing additional biological studies in other seasons, especially Spring.

(3) THE MAJORITY OF "FINDINGS" IN BIOLOGICAL SURVEYS HAVE BEEN PLANTS. RESITINGS INCLUDE 1 SITE WITH SENSITIVE CACTUS, A NUMBER OF ARCHAEOLOGICAL SITES(3), CULTURAL SITES(3) AND 30 GEOTECHNICAL SITES.

The Air Force said that HDR will be doing the Tier II environmental assessments on the IOC valleys. Further, the Air Force stated that if Nevada and Utah are selected for full basing, the Air Force will use the IOC shelter locations, since most of the sites are good (i.e., geotechnically and environmentally acceptable).

Mike Elliott said that the Tier I environmental impact statement was supposed to address the ~~differences in~~ full or split basing of the weapon system in Texas/New Mexico and Utah/Nevada.[4] ~~The other "tiered" environmental assessments will address vicinity zone impacts and site-specific impacts.~~

Major Elliott concluded by indicating that the basing mode decision will be made by the President. If full basing in Utah/Nevada is selected, Utah will have a secondary (small) operating base, as preferred in the MX DEIS. The Air Force has retained EDAW, Inc. to do base comprehensive planning at four MOB vicinity zones: Coyote Springs, Nevada; Beryl and Milford, Utah; and Clovis, New Mexico. EDAW is currently in the process of narrowing in on a 10,000 acre site within each vicinity zone to recommend for detailed studies. Within two to four weeks, the Air Force will approve a 10,000 acre site for each vicinity zone.

Major Elliott then discussed Milford vicinity zone in more detail. There are three 10,000 acre sites within the zone: 1) the north Milford site (about ten miles southwest of Milford), 2) the central Milford site (about 20 miles southwest of Milford), and 3) the south Milford site (about 30 miles southwest of Milford). The north Milford site is no longer under consideration because of high mineral potential (and the Air Force policy of avoidance) as well as other environmental ~~resource~~ considerations.

Questions about revegetation were raised. It was mentioned that the Desert Range Experimental Station has revegetation plots. Project Oasis was also mentioned; this is a $25,000 study looking at various ecozones. It is an ~~HDR~~ subcontractor and ~~HDR~~ will forward the draft report to the Air Force sometime in the next month.

Several Milford residents complained about the lack of local input into the selection of the 10,000 acre sites within the Milford vicinity zone.

[4] THE TIER I DECISION IS THE SELECTION OF A DEPLOYMENT AREA AND AN OPERATIONAL BASE VICINITY ZONE. THIS TIER I DECISION WILL BE BASED ON IMPACTS DESCRIBED AND INFORMATION DOCUMENTED IN THE FEIS. TIER 2 DECISIONS WILL BE INCLUDE IDENTIFICATION OF SPECIFIC SITE LOCATIONS WITHIN THE SELECTED TIER I VICINITY ZONE AND DEPLOYMENT VALLEYS. THE TIER 2 ENVIRONMENTAL ASSESSMENTS WILL ADDRESS SITE SPECIFIC IMPACTS WITHIN THE VICINITY ZONES AND DEPLOYMENT VALLEYS FOR SPECIFIC SITE LOCATIONS, BASED ON FIELD DATA & ON SITE SURVEYS.

AIR FORCE SITING MEETING

Milford High School, Milford

1:00 - 5:00 p.m.

May 15, 1981

A G E N D A

I. Air Force Presentation of Pine and Wah Wah Valleys Environmental Assessments - Air Force

II. Discussion of Siting Problems in Pine and Wah Wah Valleys - Open

III. Discussion of Alternative DTN Routings for Pine and Wah Wah Valleys, Transmittal of Maps and Solicitation of Input - Air Force

IV. Discussion of ASC Siting near Delta, Transmittal of Maps and Solicitation of Input - Air Force

V. General Discussion of Beryl and Milford OB Siting - Air Force

DTN = Designated Transportation Network

ASC = Area Support Center

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SCOTT M. MATHESON
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KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach and Bob McMains

FROM: Ann Keegan

DATE: June 11, 1981

SUBJECT: Quarterly Water Resources Briefing for the State of Utah by ERTEC

On May 29, 1981, the quarterly briefing on the ERTEC water resources program to the State of Utah was held. Attendees included: Fred Kuhn (AFRCE - Staff Judge Advocate); Jerry Bickle and Bruce Golden (ERTEC); Stan Green, Dee Hansen, Earl Staker and Jerry Olds (Utah Division of Water Rights); and myself. The agenda is attached. The discussion summarized below pertains only to the initial part of the meeting, since I left early.

The meeting began with a discussion of the recent data submitted to the Utah Division of Water Rights by ERTEC. The state engineer indicated that most of the data are well logs, and the data on pump tests and water drawdown are needed to determine the transmissivities and storage coefficients of the aquifers. Although some of the latter data has been provided, ERTEC does not want to give the state engineer their interpreted data, only the raw data. The state engineer wants to see the interpreted data and also work with ERTEC in refining and validating the interpretations. ERTEC has reservations about this occurring, since the transmissivity and storage coefficient data are critical in determining and assessing water availability; this is precisely the same rationale for the state engineer desiring the data.

The state engineer also mentioned that ERTEC has not submitted log cross sections. ERTEC has calculated some; the state engineer would like to see them. ERTEC said it is costly and time consuming to reproduce this data. The state engineer pointed out the Utah Division of Water Rights was short staffed. In order to make timely decisions, the state engineer could effectively use this and other FUGRO data to make his decisions. The state engineer has the ability to keep preliminary data in a confidential status.

ERTEC asked for better clarification of what the state engineer needs, as far as data are concerned in order to make his decisions. It was replied that both the state engineer and ERTEC need the same data and answers (i.e., to determine water availability) for different purposes. ERTEC is looking at a regional level for available water, as opposed to valley-by-valley as is normally done. The state engineer must be convinced of the existence of regional aquifers; he must see the data to support such conclusions.

Both ERTEC and the state engineer would like to see the ERTEC data published. It was suggested that the state engineer publish the technical data in the annual

reports journals and ERTEC publish innovative techniques or interpretations they have developed in academic journals.

It was mentioned that the MOB studies for Beryl and Milford would be available later this summer.

The status of the drilling program was then discussed. Most of the FY 81 drilling program has been completed. The carbonate aquifer portion of the drilling program was discussed at length. The work that was to have been done at the Utah MOB sites has been discontinued and the allocated monies shifted to the Coyote Springs/ Dry Lake Valley, Nevada carbonate drilling program; use of the carbonate aquifer for this MOB site is being investigated to offset the environmental and Indian impacts that could arise from using more shallow aquifers. The state engineer suggested that variable pumping of the carbonate aquifer be conducted, which FUGRO replied is their standard operating procedure. The proposed carbonate drilling program in Utah for FY 82 includes drilling in Fish Springs Flat and Dugway Valley; use of the carbonate aquifer in these valleys would also be due to environmental impacts. Whether this drilling program is approved will not be known until the beginning of the fiscal year (October of 1981).

Stan Green mentioned that the test and observation well permits expire in September. ERTEC is aware that these must be renewed at the start of the next fiscal year.

The Wah Wah Valley drilling program was then discussed. The well was drilled to 1350 feet and tested at 375 feet. The transmissivity has been estimated to be 41,000 square feet per day. The storage coefficient has been estimated to be 2×10^{-1} (it was conceded that this does not look right and will probably be revised downward in the near future). There was no indication of a shallow aquifer, only a deep aquifer with no head.

The state engineer indicated he needs more information on the IOC valleys and design wells. The state engineer has assumed a low-key posture in requesting ERTEC data. It was apparent that much more data are available than have been transmitted to Utah, and (in my opinion) ERTEC is overly sensitive about the data being used against them in court. The state engineer indicated several times that he is not interested in litigation and does not have an adversarial position on the granting of water rights, merely a technical position as specified under law. I am concerned with what I perceive as the ERTEC and Staff Judge Advocate presumption that the State of Utah is taking an adversarial posture in every instance. I feel the state engineer, albeit in a low-key manner, stated forthrightly that, given the staff shortage, withholding of data is not in the interest of making timely water rights decisions.

If the State of Utah really wants to take a more visible position on the transmittal of data, I think we need to talk with the AFRCE.

MEETING AGENDA

MX WATER RESOURCES AND WATER APPROPRIATIONS

Friday, 29 May 1981, 1000 hours
Division of Water Rights
231 East 4th Street, Suite 200
Salt Lake City, Utah 84111

1. Water Resources Program

   a. Questions and comments concerning recent data submittal
   b. Status of Drilling Program
   c. Status of Modelling Program
   d. Key Milestones for FY 1981

2. Water Appropriations - Public Hearings

   a. Valley Priorities
   b. Schedule
   c. Format
   d. Location - County seat? Location when points of diversion in two counties.

3. Water Appropriations - General

   a. Procedure and Optimum time period to change points of diversion?

   b. Monitoring Program - Discuss recent letter to Stan Green.

4. Other Discussion.

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach and Bob McMains

FROM: Ann Keegan

DATE: June 19, 1981

SUBJECT: Cultural Resources Meeting

On June 10 and 11, 1981, a cultural resources meeting was held at the Corps of Engineer's MX Program Analysis (CEMXPA) office in San Francisco, California. The agenda, attendance list and handouts are attached. The discussion is summarized below.

Howard Watts (AFRCE-MX/DEVN), began the meeting with introductions. He indicated that he would like this group to become a cultural resources management team. One representative from each affected organization (the Air Force Regional Civil Engineer's Office for MX (AFRCE-MX), the Bureau of Land Management (BLM), the State Historic Preservation Officers (SHPOs) and the contractors) would meet regularly to see that the Programmatic Memorandum of Agreement (PMOA - see Attachment A) is properly implemented.

Next, representatives of the Human Environmental Resources Corporation (HER Corp) discussed Attachment B, which is a series of relevant organizational charts prepared for the cultural resources participants. Their review is necessary to gain a perspective on the MX cultural resources program participants, organizational hierarchy and interface/contact points.

Figure 1, Part 1: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The AFRCE-MX is responsible for the design and environmental analysis of the MX weapon system. Fourteen different contractors are involved in cultural resources analysis and planning. HER Corp is responsible for assisting the AFRCE-MX in cultural resources program management. Their first deliverable, which is due next week, will outline the planned studies of all MX-related contractors until the end of the current fiscal year (September of 1981).

Figure 1, Part 2: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The federal agencies cooperating with the Air Force on the MX project are outlined. The inclusion of theForest Service was discussed, since they have not (to date) been actively involved in coordination of any kind with the Air Force on MX. A meeting will be scheduled in the near future with the Regional Forester to actively seek the agency's involvement. It will probably be held in Utah.

Figure 1, Chart 3: CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS AND PROJECT PLANNING

The functions of the Corps of Engineers (COE), CEMXPA and the various districts/ research elements involved in environmental studies, engineering and planning are listed. The COE's involvement at this time is only with the Tier IIA environmental assessments (EAs).

At this point, there was a digression on tiering. The Air Force is not certain about the level of detail and sequencing of the Tier II EAs. The land withdrawal application will be a component of Tier II. Tier III EAs will deal with the pre-construction environmental requirements. The Tier II analyses will be equivalent to class 2 studies, and the Tier III analyses will be equivalent to class 3 studies. Currently, environmental studies (including cultural resources) are being undertaken by Henningson, Durham and Richardson (HDR) and EDAW at the four candidate main operating base (MOB) locations; the results will form the basis of the first increment of the Tier IIA EA. However, there is a serious timing problem in bridging the Tier I environmental impact statement, the Tier II EA, and the Tier III EAs.

Figure 2: ORGANIZATIONAL CHART OF AFRCE-MX/DEVC

The structure of the Environmental Planning Divsion (one of several in the AFRCE-MX) is the most relevant to cultural resources participants. The four branches and their functions and responsibilities were discussed briefly.

Figure 3: CEMXPA ORGANIZATIONAL CHART

The COE representatives indicated that this chart is incorrect. They discussed the actual COE hierarchy. CEMXPA is a recently established organizational element dealing only with MX; it is seeking divisional status. The districts/ research elements are in a cooperating status with CEMXPA but are not responsible to it (e.g., the Los Angeles District is responsible to the South Pacific Division). CEMXPA is the equivalent of a division, but without any support elements. The usual chain of responsibility is district to division to the Chief Engineer. In this unusual circumstance, the districts/research elements coordinate their activities with their division, but also deal directly with CEMXPA. CEMXPA works directly with the AFRCE-MX.

MX design activities will be concurrent with construction; this will require close cooperation and monitoring of all impacted resources, especially cultural resources. It is estimated that during the peak construction years, ten miles

of road will be built per day. Continuous monitoring of archaeological resources will be necessary. The Tulsa District will have 16 separate contracters next fiscal year simply to design MX roads at a Clovis, New Mexico MOB.

An updated status of the MX project then was discussed. Currently, the AFRCE-MX CEMXPA and their contractors are all proceeding as if the Carter basing mode made will be confirmed. The basing mode decision process (Townes Panel/Secretary of Defense/ Presidential) was reviewed, as well as the Congressional requirements to be met. The President will submit the basing mode decision to the Congress; the Secretary of Defense will provide the justification, including a comparison of alternative basing modes. The Appropriations committee will review the basing mode decision and come to a conclusion. If required, the land withdrawal will be enacted.

Howard Watts then asked all of the participants to introduce themselves again, and discuss their cultural resources responsibilities and their current and future field work and studies. This would give everyone a perspective on who is doing what where.

Sandra Schultz (CEMXPA) began by reiterating the role of CEMXPA in relation to the COE districts/research elements and the AFRCE-MX. The COE will act as the MX construction for the Air Force. The communication-responsibility channel is: COE district research elements to their division to the CEMXPA to the AFRCE-MX to the Air Force contractors. There was discussion on the inefficiencies of this network; however, due to the formalized management controls imposed by the CEMXPA and the AFRCE-MX, greater flexibility (especially with respect to communication) seems unlikely.

Helen Wells (Los Angeles District COE) said her district is responsible for the MX design and construction activities at the Coyote Springs, Nevada MOB location At this point, Catherine Slusser (EDAW) asked for clarification of the COE responsibilities.

EDAW is doing the base comphrensive plan for the MOB. They are currently looking at all four sites; they are reviewing the literature and environmental resource field data for these sites. The life support system (construction camp) will be within the metes and bounds of the 10,000 acre site where EDAW is to conduct field activities.

It became apparent that there is confusion between the COE and EDAW about their respective responsibilities. Their responsibilities appear to overlap, especially with regard to design and selection of facility sites.

There was then a digression on the question of overlapping responsibilities. It is the understanding of the Tulsa District that it would only design and site the MOB roads. The Tier IIA EA (selection of an MOB site) will incorporate data gathered by EDAW and HDR. HDR is responsible for the development of the Tier IIA EA. Further, the COE has been told by the AFRCE-MX not to contact <u>any</u> Air Force contractors.

John Fagan, (Portland District COE) said that it was his understanding that the Portland District was to use the results of EDAW's 20 percent cultural resources

sample survey and conduct the intensive class 3 cultural resources survey at the selected 10,000 acre site (Milford MOB location). The COE would make the final site selection and complete the detailed engineering designs for each facility.

Catherine Slusser said the EDAW ECP contract specifies that EDAW conduct preliminary sitng and design activities at each of the four MOB locations. After the Air Force selects one MOB location, EDAW will concentrate on this location. Their primary responsibilities are for site selection and detailed design of facilities, utilities and roads. Archaeology is represented on their environmental assessment team. At four ten-thousand acre site (metes and bounds) within each vicinity zone is where the 20 percent cultural resources sample survey woul be done (according to contract). However, bec se the Air Force has not approved EDAW's recommended sites, EDAW began the surveys in the recommended sites, at some site enlarging the area to be surveyed. (The survey area at the Milford site is approximately 40,000 acres while the survey area at the Beryl site is about 23,000 acres). EDAW's preliminary Tier IIA EA data area due this month and the final data are due in August; however, these submittal dates are contingent on the Air Force's approval of the sites currently being surveyed.

HDR indicate that the draft Tier IIA EA is scheduled to be submitted to the Air Force in August, with the final EA due in October. However, both the COE and HDR conjectured these dates will slip. The COE will prepare EAs on their 1200-acre tract and transportation-communication-utilities corridors this fiscal year within the EDAW MOB sites.

Jan Tilloston (ERTEC NW) discussed the environmental clearances (cultural and biological) conducted at specific MX weapon system facility sites (shelters, cluster maintenance facilities and remote surveillance sites) in the Initial Operating Capability (IOC) valleys (Dry Lake Valley, Nevada and Pine and Wah Wah Valleys, Utah). HDR asked whether both direct and indirect impacts were examined; EDREC NW replied both were, but the extent of indirect impact assessment was limited to the valleys. There was some question as to whether this would constitute an adequate assessment of indirect impacts. An extended discussion about the HDR and ERTEC NW responsibilities and Tier II requriemments.

The cultural resources inventories for the IOC valleys and at the MOB sites will serve as the primary data base for addditional intensive, site-specific studies. The COE said that the ultimate responsibility for cultural resources management was theirs.

Gary Coombs (HER Corp) said that they have tasked with devising an implementation plan for the PMOA. They have two main deliverables; the first will deal with the laws pertaining to the cultual resources,and the second will outline a cultural resources study plan (archaeology, history, and prehistory (Indian) to fulfill the intent of the PMOA. HER Corp is attempting to integrate the various goals of different contractors by coordinating their activities (especially the scopes of work) with the regulatory agencies specified in the PMOA (the BLM and the SHPOs). The cultural resources managment plan being developed will insure that satisfactory consultation (as oulined in the PMOA) does occur. HER Corp will also provide technical assistance to the AFRCE-MX, such as reviewing documents. They will help the AFRCE-MX implement a centralized master environmental resources data bank, propse standardized cultural resources reporting procedures to be used

by all contractors, and provide liaison to the academic and professional communities. Their goal is to formulate a sequential, integrated series of programs to be implemented in a standard form.

Ralph Mitchell (CERL) indicated that CERL was responsible for the design of the life support system(or construction camp) at the Beryl MOB location. He asked for guidance on the proposed archaeological work to be done by contract. CERL was told that it must have the BLM/SHPOs approval of any scope of work, in order to satisfy the PMOA's consultuation requirements. The cumbersome process that CERL must follow is: CERL to the CEMXPA to the AFRCE-MX to the BLM/SHPOs and reverse.

Betsy Holbrook (HDR) said that they will soon be initiating Native American cultural and socioeconomic studies. Teams will be sent into the field to interivew the Southern Paiutes. HDR is concerned that this work is scheduled for completion by July 15, and although its extension seems necessary, it may not be extended because of the Tier IIA EA deadlines. HDE is currently developing the scope of work; it will be coordinated with the BLM and the SHPOs.

Michael Macko (HDR) said HDR is examining the direct and indirect cultural resources impacts (architectural, archaeological, historical and prehistorical) of locating an MOB at each of the four locations under consideration. HDR said that since they are under contract to the Ballistic Missile Office (BMO), that it is an Air Force responsibility to coordinate the PMOA, not theirs. There was an extended discussion on this point. Further, HDR said that many study parameters (e.g., sample size, area of influence, sample design, etc.) should be clarified for each contractor.

Holly Dunbar (IAS) discussed the function of the Interagency Archaeological Services. The agency's primary involvement with the MX project will be the emergency discovery of archaeological sites. Whenever this occurs, construction activity is halted and the appropriate federal agency(probably the COE in this case) contacts the IAS archaeologist in Washingtion, D. D.; a staff archaeologist is dispatched to the site within 48 hours and consults with the other archaeologists (e.g., COE, BLM, SHPO. contactor) to agree on the acceptable salvage to be done.

Laverne Herrington (Texas SHPO) and Hugh Ball (New Mexico SHPO) both said that they were not involved actively with MX as yet. They both indicated that they are in a holding pattern until the basing mode decision is made.

Rich Haynes (Nevada BLM) said that he is concerned with the resiting criteria. It is impractical to avoid impacting cultural resources. The BLM would like to see the National Register significance evaluation and the determination of the MX project's effect on a site be done by the same individual who does the field work. This is curently not a common cotractor paractice (e.g., HDR contracts for the data collection but analyzes the data in-house, while ERTEC has the same individuals evaluate the data as collected by them). The BLM is concerned with preserving the integrity of cultural resources analyses to insure continuity. It was further stressed that this evaluation and determination of the MX project's effect process needs to be done in consultation with the BLM and the SHPOs. Furnishing inventories is not acceptable to the BLM. It is his understanding that Tier II is concerned with the MOB sites and Tier III with the IOC valleys. He has attempted to alert the Air Force to potential problems with tiering and the PMOA. Also, the BLM is still waiting for HDR to transmit their

final report from last year --- this situation is jeopardizing the Nevada State Museum's BLM antiquities permit. It was mentioned that the MOB will have 30,000 people.

Wilson Martin (Utah SHPO) then explained the role of the SHPO in the PMOA; the role is one of liaison and assisting the Air Force in determining the least risk path. Helpful services can be provided. Several pertinent sections of the PMOA were reviewed. He is concerned about the discussion of cultural resources managemnt with no committemnt to act appropriately.

Catherine Slusser gave a brief description of EDAW's archaeological surveys at the four MOB sites (within the vicinity zones). EDAW began their 20 percent sample surveys within the preferred sites, but since the Air Force has not concurred with these to date EDAW has expanded the area to be surveyed at the Beryl and Milford locations, becuase of Air Force uncertainties about the recommended sites. EDAW hired a team of three sub-contractors (Nevada State Museum, University of Utah, Eastern New Mexico University, as well as the consultant from Tennessee -- Robert Newman) to insure comparability of work and development of an applicable program. The Work began in May at all four recommended sites, and is still in progress at the Milford location. Howard Watts referred to large, color MOB vicinity zone LANDSTAT maps at AFRCE-MX, but EDAW has not seen them. Twenty-five meter transect were walked at each of the sites/extended areas; shovel testing was done, but no machine testing. The results for each site were briefly discusssed. Only the Utah areas are discussed below.

Beryl

Thirty-two sites were found at the Beryl expanded area, concentrated around the foothills and the mouths of springs. EDAW is looking at other potential ten-thousand acre sites in the southwest sector of th vicinity zone for environmental and cultural reasons (i.e., to lessen the impacts on the foothills). Six to eight of the sites found were significant and they were all isolated sites. A 20,000 acre area was surveyed, containing three overlapping alternative sites; to date EDAW has no clear indication of prefernece from the Air Force.

Milford

The southern Milford site has already been surveyed and currently the central Milford site is being surveyed. Five sites were located, and at least one of them was historical (homestead). The preliminary reports are due next week.

Rich Fike asked whether EDAW is having their subcontractors determine the eligibility of sites. EDAW said this requirement is included in their subcontractors' scopes of work. HDR asked whether indirect impacts are being determined as well; EDAW said they are only doing a 20 percent sample survey within the sites/expanded areas.

EDAW did consult with the Southern Paiutes, who sent representatives out in the field with the archaeologists. The Indians volunteered little information. The consultation included the entire vicintiy zone, not just the transect s that were walked. The Southern Paiutes would only identify what the archaeologists found.

HER Corp then discussed activities to date (see Attachemnts 1-4). The history of the PMOA was reiterated; the PMOA was signed in August of 1980 bythe Advisory Counsel on Historic Preservation, by the Air Force in October of 1980, and subsequently, by the BLM and two of the affected SHPOs (including Utah). On May 1, 1981, the HER Corp contract became effective, and they initiated work on the cultural resources implementation/management plan. Their first deliverable is due in draft form to the Air Force on June 18, 1981. It will examine the legal requirements, and in particular the scheduling of the Air Force/COE contractors' activities and the construction sequence. To date, HER Corp has developed three separate, complimentary programs: 1) an archaeological compliance program, 2) a Native American compliance program, and 3) a history/architecture/community studies compliance program.

Howard Watts asid that HDR's environmental resources data are to be forwarded to the AFRCE-MX next week. TRW submitted a proposal to develop and maintain a centralized environmental resources data bank at the AFRCE-MX; the Air Force did not accept the proposal for this fiscal year, but it is under consideration for future years.

It was proposed that a hierarchy of authority be developed. The AFRCE-MX should use a mangagment team and maintain a centralized data bank. The AFRCE-MX directly interfaces with their own contractors and the CEMXPA. CEMXPA has direct links through the divisons to the districts/research elements who directly interface with their own contractors. The Contractors should not have to worry about Air Force/COE coordination and management responsibilities. Roles need to be explicitly defined indicating responsibilities and authority. The Air Force needs to effectively manage the project. The BLM said this could cause problems, because the contractors have BLM antiquities permits and the data collected are the property of the BLM. The COE said that data are being collected with federal funds; therefore, it is public information to be shared with all. Further, withholding the data are contrary to professional standards. The lack of coordination with multiple concurrent efforts is a serious problem. HER Corp will assist the Air Force in developing and implementing a cultural resources management plan. The COE suggested that the Air Force disseminate a written policy establishing a coordination/liaison network.

At this point, HER Corp formed three discussion groups (one for each program). The activities Air Force/COE contractors were discussed, as well as the consultation and data the SHPOs would be able to provide. HER Corp was gathering this information to modify the three programs to insure that the required cultural resources studies would be conducted in a thorough and a timely manner.

MX CR Meeting San Francisco 6/10/81
Afternoon

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MX CULTURAL RESOURCES MEETINGS
SAN FRANCISCO JUNE 10-11, 1981

AGENDA

Wednesday Morning, June 10

Planning session for FY81 cultural resource studies. ERTEC NW, AFRCE, HER Corp. Purpose is to establish priorities for FY81 studies and to develop plans for implementing these studies.

Wednesday Afternoon, June 10

General session involving all contractors involved in MX cultural resource studies. Purpose is to introduce the multiple players involved in MX studies and to establish a framework for communication and coordination during the upcoming studies.

Thursday Morning, June 11

General session involving all contractors involved in MX cultural resource studies. HER Corp. personnel will present a status report on the PMOA Management Plan that is being developed. A draft version of an annotated outline for the Management Plan will be distributed for review and comment.

Thursday Afternoon, June 11

Small group sessions. Topics to be determined.

1522 K Street, NW
Washington, DC 20005

PROGRAMMATIC MEMORANDUM OF AGREEMENT

WHEREAS, the U.S. Air Force, Department of Defense, proposes to deploy the M-X System (undertaking) within the States of Nevada, New Mexico, Texas, and/or Utah; and,

WHEREAS, the M-X System may be deployed on land managed by the Bureau of Land Management (BLM), and BLM and the Air Force have management responsibilities with regard to historic properties pursuant to Executive Order 11593, and the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320); and,

WHEREAS, the Air Force has assumed lead agency status and primary responsibility for compliance with the historic preservation statutes and regulations referenced herein on behalf of both itself and BLM; and,

WHEREAS, the Air Force, in consultation with the State Historic Preservation Officers (SHPOs), has determined that the proposed undertaking could have effects upon historic and cultural properties included in or eligible for inclusion in the National Register of Historic Places (Register); and,

WHEREAS, pursuant to Section 106 of the National Historic Preservation Act of 1966, Section 2(b) of Executive Order 11593, and Section 800.4 of the regulations of the Advisory Council on Historic Preservation (Council), "Protection of Historic and Cultural Properties" (36 CFR Part 800), the Air Force has requested the comments of the Council; and,

WHEREAS, pursuant to 36 CFR Sec. 800.8(a) of the Council's regulations, the Air Force has requested development of a Programmatic Memorandum of Agreement (Agreement); and,

WHEREAS, the Air Force, the Council, BLM, and the SHPOs of Nevada, New Mexico, Texas, and Utah have consulted and will continue to consult and review the undertaking to consider feasible and prudent alternatives to avoid, minimize, or satisfactorily mitigate adverse effects,

NOW, THEREFORE, it is mutually agreed that implementation of the undertaking in accordance with the following stipulations will avoid or satisfactorily mitigate its adverse effects on historic and cultural properties.

Stipulations

The Air Force will insure that the following measures are carried out.

I. General

A. The Air Force will establish a Review Committee to assist in oversight of all historic preservation related M-X activities to insure that such activities meet high standards of professional methodology. The committee will report to the Executive Director of the Council and to the Air Force, and will act and be funded in accordance with Attachment 1.

B. The Air Force will afford the appropriate SHPOs, and the State offices of BLM, opportunity to review and comment on all scopes of work, and significant revisions of such scopes, relating to historic preservation; and the opportunity to review and comment on the historic preservation reports or products generated under this Agreement. Informational copies of these documents will be provided to the Council.

C. The Air Force will provide data generated under this Agreement to the appropriate SHPOs and State offices of BLM.

D. The Air Force, in consultation with appropriate SHPOs, will notify the public of intended significant actions under this Agreement, will provide timely notice to news media, and will afford the public the opportunity to comment to the Air Force, the SHPOs, or the Council regarding these actions.

E. The Air Force, in consultation with the appropriate SHPOs, will ensure that all historic preservation activities are carried out by or under the supervision of, qualified persons as prescribed in 36 CFR Sec. 1201.5.

F. The Air Force will ensure that all stipulations of this Agreement are met by its contractors as well as by all participating units of the Air Force.

G. The Air Force, in consultation with the appropriate SHPOs, will ensure that its contractors and Air Force personnel and resident dependents are advised against illegal collection of historic and prehistoric materials, will encourage those with interests in such materials to participate in nondestructive activities, and will cooperate with BLM to insure enforcement of the Archeological Resources Protection Act of 1979.

H. Pursuant to 36 CFR Sec. 800.8 of the Council's regulations, the Air Force will submit an annual report to the Council, the SHPOs, and to Interagency Archeological Services (Heritage Conservation and Recreation Service, Department of the Interior) on all actions taken pursuant to this Agreement.

I. The Air Force will provide data to assist the SHPO's in identifying and documenting the budgetary and staff impacts arising from this undertaking. on the SHPO

II. Identifying and Mitigating Adverse Effects of Construction and Operation

A. In consultation with BLM and the appropriate SHPOs, and in accordance with the guidelines in Attachment II, the Air Force will locate and identify historic properties in the potential impact area, determine their significance, and assess the undertaking's impact upon them by:

1. development of an initial study plan, including but not limited to:

   (a) definition of preliminary study goals

   (b) establishment of study methods

   (c) indication of predicted types of historic and cultural properties

   (d) establishment of study team composition

   (e) establishment of programs for data storage, management, and use which are, to the extent feasible, compatible with existing State and BLM systems,

   (f) development of a calendar of tasks (see Attachment II);

2. conducting preliminary studies based on the study plan, including background data and field inspection of sample areas during initial environmental analyses of the potential impact areas, to predict where adverse effects upon historic and cultural properties are likely to occur;

3. development and implementation of a plan for intensive field survey of all locations where adverse effects upon historic and cultural properties are likely to occur in the vicinity of potential MX permanent and temporary facilities such as base sites, access and utility corridors, borrow sources, and other MX support facilities. This plan will include:

   (a) description of historic and cultural property types expected

   (b) predicted distributions of historic and cultural properties

(c) study questions to be addressed

(d) study methods; including methods of field inspection, testing, and analysis

(e) study team composition

(f) data storage and management program.

B. Where prudent and feasible, in consultation with the SHPOs and BLM, the Air Force will avoid adverse effects on historic and cultural properties through design of M-X facilities, by relocation of existing facilities, or by other means.

C. In consultation with the SHPOs and BLM, the Air Force will develop guidelines for documentation or data recovery from historic and cultural properties that cannot be avoided or protected. The guidelines will take into account:

1. the data generated by the preliminary and intensive studies

2. the concerns of local communities and social and ethnic groups

3. the Native American Religious Freedom Act

4. 36 CFR Part 66 and its appendices published by the Department of the Interior on January 28, 1978 (42 FR 5374-82)

5. the standards of the Society of Professional Archeologists

6. other applicable Federal regulations, standards, and guidelines.

D. The Air Force will in a timely manner deliver copies of the initial study plans (II.A.1) and guidelines for data recovery (II.C) to the Review Committee, the State BLM offices, and the appropriate SHPO and afford them 15 working days after receipt, to review them. The Review Committee, SHPO, and BLM will provide written notice of receipt and indicate their objections, if any, within 15 working days. Should the Review Committee, SHPO, or BLM object, the Air Force will arrange a meeting to resolve differences before proceeding with the action to which the Review Committee, SHPO, or BLM has objected. If the differences cannot be resolved, the Air Force will take the comments to the Committee, SHPO, and BLM into account in deciding whether to and how to proceed.

E. When it is not prudent or feasible to avoid adverse effects upon a historic or cultural property, the Air Force will follow 36 CFR Part 1204 to determine whether the property is eligible for inclusion in the Register, and consult with the appropriate SHPO and BLM as appropriate, and,

1. if the affected property meets criteria for listing in the Register primarily because it may yield information important in prehistory or history, the Air Force will institute a documentation or data recovery program in accordance with the Guidelines established under Stipulation II.C. Prior to initiating any documentation or data recovery program, the Air Force will notify the Review Committee, BLM, SHPOs, and any concerned local communities, or social and ethnic groups. Should an objection be raised, the Air Force will consult with the objecting party to resolve the objection. If no agreement can be reached among the Air Force, the SHPO, and BLM on the documentation or data recovery program, the Air Force will request the comments of the Council pursuant to 36 CFR Sec. 800.6;

2. if the affected property is determined eligible for listing in the Register for reasons other than, or in addition to, its information potential, the Air Force will consult with the appropriate SHPO to determine the nature of the undertaking's effect on the property and, pursuant to 36 CFR Sec. 800.4(d), request Council comments.

F. Pursuant to the American Indian Religious Freedom Act of 1978 (P.L. 95-341), the Air Force will consult with groups that have cultural ties to the study area in order to identify locations and issues of concern to them and to work with these groups and the parties to this Agreement in resolving conflicts. The Air Force will take the concerns of these groups into consideration during the design and construction of the undertaking, and during implementation of this Agreement.

G. During the implementation of any portion of the undertaking, should previously unknown historic or cultural properties be discovered, the Air Force will comply with 36 CFR Sec. 800.7 and/or the data recovery guidelines developed under paragraph C above.

H. Before M-X construction is complete, the Air Force will consult with the SHPOs and the BLM to establish preservation mechanisms to accompany operation and maintenance of the facilities. Operation and maintenance will also be covered under this Agreement.

III. The Air Force and the Council will work together as members of the Economic Adjustment Committee in an effort to ensure that Federal Government activities to accommodate population and infrastructure growth resulting from M-X deployment are sensitive to the historic and cultural values of the deployment areas. The parties agree in principle that the Federal Government should assist affected States and communities in the development and implementation of programs that will contribute to protection of the historic and cultural character of communities subject to short-or-long term growth as the direct or indirect results of the undertaking. Such programs should be commensurate in scope

with the level of projected impact of the undertaking on each affected community, and include but not be limited to:

A. identification of districts, sites, buildings, structures, and objects included in or eligible for inclusion in the Register within each community;

B. development and implementation of measures to minimize destruction and maximize preservation and reuse of historic sites, buildings, structures, districts, and objects in Federal construction and assistance projects within each affected community;

C. establishment of design guidelines to make new construction as compatible as possible with the historic environment of each community; and,

E. establishment of measures to foster successful integration of new facilities into the existing cultural and architectural fabric of each community.

IV. Avoiding Inadvertent Damage During Pre-Construction Studies

A. The Air Force will ensure that proper coordination occurs between its personnel and contractors responsible for historic preservation and its personnel and contractors responsible for environmental, geological, engineering, and other studies, to minimize the danger posed to historic properties by geological testing, survey teams, and other activities and personnel. Intensive surveys will be conducted in advance of any land-modifying activity. Geological test sites and other locations of land-modifying activity will be designed to avoid damage to historic properties.

B. If test excavations are necessary to obtain data needed for the evaluation of historic properties under Stipulations II.A.2 and II.A.3 above, the excavations will not be allowed to exceed the scope necessary for basic evaluation, will not utilize mechanized equipment without the approval of the appropriate SHPO and BLM, and will be carried out in accordance with strict archeological controls.

V. Definitions

As used in this Agreement:

A. Air Force means the U.S. Air Force acting by itself or through agents or contractors.

B. Historic and Cultural Properties means properties included in or likely to meet the criteria for inclusion in the National Register of Historic Places.

C. Historic preservation includes, but is not limited to, the identification, evaluation, protection, rehabilitation, reuse, recording of, and salvage of historic properties.

D. Potential Impact Area means the area in which the undertaking may reasonably be thought to have potential positive or adverse, direct or indirect effects upon historic properties.

Robert Garvey Aug 29 (date) 1980
Executive Director
Advisory Council on Historic Preservation

SIGNED SIGNED
(date)
U.S. Air Force

(date)
Bureau of Land Management

(date)
Nevada State Historic Preservation Officer

(date)
Texas State Historic Preservation Officer

(date)
Utah State Historic Preservation Officer

(date)
New Mexico State Historic Preservation Officer

(date)
Chairman
Advisory Council on Historic Preservation

ATTACHMENT 1

Review Committee Guidelines

A. Responsibilities

1. To monitor progress of the M-X Historic Preservation Program and advise the Air Force and Council of any actions needed to ensure maintenance of high professional standards.

2. To review guidelines, scopes of work, research designs, survey reports, and other documents developed by the Air Force and to advise the Air Force and the Council of any changes appropriate to ensure maintenance of high professional standards.

3. To assist in the resolution of disputes that may arise over the quality or appropriateness of particular historic preservation related activities, or of the M-X Historic Preservation Program in general.

B. Organization:

1. Membership will consist of:

a. the Executive Director of the Council and the Secretary of the Air Force or their designees, who will co-chair the committee;

b. the Director of BLM or his designee;

c. the following non-Federal members who will be appointed by the Executive Director and the Secretary of the Air Force:

1) one professional archeologist knowledgeable in the archeology of each general basing region (e.g., Texas, New Mexico, Utah/Nevada)

2) one professional historian, preferably one with a knowledge of architectural history who is also knowledgeable in the history of each general basing region

4) other members as the Secretary of the Air Force and Executive Director may determine to be necessary.

2. Procedures:

a. the committee will meet at the call of the co-chairmen;

b. the committee may assign tasks to subcommittees or individual members;

c. the Air Force will provide staff support; and,

d. the committee will forward any meeting announcements, minutes, and other documents afforded to committee members to the SHPOs.

3. Funding: The Air Force will fund:

a. costs of travel and per diem;

b. stipend not to exceed $100 per day for non-Federal committee members engaged in committee business;

c. postage and telephone.

ATTACHMENT 2

Guidelines: Calendar of Tasks

Task I.

A. Initial study plan (II.A.1)

B. Establish review committee (I.A.;Atch.1)

Task II.

A. Conduct preliminary studies (II.A.2)

B. Develop plan for intensive field survey (II:A.3)

C. Develop guidelines for documentation and data recovery (II.C)

Task III.

A. Conduct intensive field survey (II.A.3)

B. Redesign to avoid historic properties where feasible and prudent (II.B)

Task IV.

A. Determine eligibility and effect, and mitigate adverse effects (II.E).

Consultation occurs, and comments are considered, at the beginning and completion of each task.

time, salaried officers or employees of the Government.

b. An advisory committee may be established to serve the Department of the Air Force as a whole, a single command or other Department of the Air Force activity or serve such activities collectively, provided that no advisory committee will be formed or utilized by any activity of the Department of the Air Force unless (1) the committee is specifically authorized by law, or (2) the committee is specifically approved, in writing, by the Secretary of Defense, to be in the public interest in connection with the performance of duties imposed on the Department of the Air Force or one of its subordinate activities.

c. An advisory committee whose duration is not otherwise fixed by law will terminate no later than 2 years from the date of its formation unless the Secretary of Defense has determined, prior to the expiration of such 2-year period that its continued existence is in the public interest. A similar determination must be made to continue the existence of such a committee for each subsequent 2-year period thereafter.

25. Rules for Forming, Continuing, and Appointing Members of Advisory Committees:

a. No activity will form, utilize or participate in an advisory committee, other than those committees excepted by paragraph 23, without the advance specific approval, in writing, by the Secretary of Defense.

b. Commands desiring to form, utilize, or participate in advisory committees will submit requests for Secretarial approval to HQ USAF/DPCX. Five copies of the requests with command level signature will be submitted by command CMOs and will include:

(1) A statement that the major commander has determined that the proposed establishment, utilization of, or participation in a committee is in the public interest in connection with the performance of duties imposed on the Department of the Air Force, and that he has selected or approved the selection of any proposed committee members according to the provisions of this regulation.

(2) The reasons why the formation or use of the committee is in the public interest. This is a key justification, and must be made in the light of the policies on committee management in paragraph 7. The justification also should contain statements (if applicable) that the committee can provide needed talents and services not otherwise available to the Air Force, and a statement that the views of the non-governmental groups or organizations represented thereon are needed, and the reasons why.

(3) A statement indicating the results of the requesting commands having contacted other Government departments and agencies (DOD or otherwise) which may have formed or may be utilizing an advisory committee with similar objectives and activities. The reasons for establishing or utilizing a new committee, rather than affiliating with or participating in an existing committee, must be clearly stated if the objectives and activities of any other Air Force or non-Air Force advisory committee formed or utilized by the Government are similar.

(4) A statement that the committee is an advisory committee.

(5) A list of the proposed membership, including the name of the proposed chairman or the manner in which a chairman will be selected. For those nominees who are full-time, salaried officers or employees of the Government, list name, title, grade, or organization. For other nominees, provide brief biographical statements listing their names; employment; industrial, institutional, Governmental or other affiliations; any other relevant data such as education, special qualifications or skills, and publications (see attachment 5). Biographical information will be handled as personal or privileged information. If it is necessary to contact an individual for biographical data, the person may only be informed that he is being considered for membership on a given advisory committee. However, when individuals are asked to provide data they must be provided with the Privacy Act Statement shown in the box at the bottom of attachment 5 together with the biography format information being requested. (Nominees for Air Force advisory committees must be approved by the Secretary of Defense before being approached officially concerning membership.)

c. Membership of an advisory committee necessarily depends on its functions. For example, in the case of a committee whose sole function is to consider scientific questions, it may be proper to limit the membership to persons with scientific background. However, such a committee should include persons representing different points of view and different types of employment (education, industry, transportation etc.).

d. Whenever feasible, the membership of a committee should include:

(1) Representatives of the public interest.

(2) Representatives from a variety of economic and social groups and geographic areas is desirable. No strict rule of proportional representation of the various types of groups is applicable. However, steps should be taken to insure that, in regard to the selection of advisory committee members, there will be no discrimination solely on the basis of race, color, national origin, religion, or sex.

(e) Requests for membership changes are submitted according to b above; however, required information is limited to the membership data in b(1) and (5) above, for proposed nominees. In addition, include the names of any current members to be replaced; and the reasons for the proposed change. Command CMOs will subsequently provide HQ USAF/DPCX with the names of those approved nominees who have been appointed to committee membership.

NOTE: Once an advisory committee has been established there is no need to advise higher authority on any membership changes which relate to full time Government employees.

26. Committee Charters:

a. For each Air Force advisory committee a charter is required. The establishing directive may serve as the charter if it contains:

(1) The committee's official designation.

(2) The committee's objectives and the scope of its activities.

(3) The period of time necessary for the committee to carry out its purpose.

(4) Organization and official to which the committee reports.

(5) The organization responsible for providing the necessary support for the committee.

(6) A description of the duties for which the committee is responsible, and if such duties are not solely advisory, specify the authority for such functions.

(7) The estimated annual operating cost in dollars and man-years for such committees.

(8) The committee's termination date, if less than 2 years from the date of the committee's establishment.

(9) The date the charter is filed.

b. Duration of Charters. Advisory committee charters will extend for a 2-year period after which renewal will be required. Renewal action will be accomplished by forwarding eight copies of the charter with appropriate changes, if any, to AF/DPCX, prior to 15 November of the year renewal is required. Normally, all charter renewals occur during the same time period; thus if a committee were established between years, a charter renewal would be required even if the committee was in existence for 1 year.

c. No advisory committee will meet or take any action until its charter has been approved by OSD and OMB. When forwarding requests for charter approvals or changes to charters, information will be forwarded no more than 75 days or less than 45 days before the committee convenes or expires and will include the following information:

(1) The nature and purpose of the committee.

(2) A statement that renewal is necessary and in the public interest.

(3) The reasons for the determination.

(4) The committees plan to attain balanced membership.

(5) An explanation of why the committee's function cannot be performed in-house or by an existing advisory committee.

d. Each advisory committee will file a charter complying with Section 9(c) of the Act.

e. Subcommittees of Advisory Committees do not have to be separately chartered if:

(1) All members of the Subcommittee are members of the parent Committee.

(2) The Subcommittee reports to the parent Committee.

(3) The Committees charter indicates that Subcommittees may be formed.

(4) The task(s) of the Subcommittee fall within the scope of the parent Committee's charter.

f. Any Subcommittee that does not meet the above indicated criteria will have to be chartered as a separate Committee and will report separately from the parent Committee.

27. Security/Membership Requirements:

a. When classified or "For Official Use Only" data are submitted (for example, proposals, recommendations, or reports), they will be properly classified and specifically identified according to Air Force guidance.

b. Name checks, security clearances, and any other requirements as a condition of which individuals may serve as committee members or be employed as advisors or consultants are the responsibility of the major command concerned. Command CMOs will insure that such requirements have been complied with prior to any individual's participation in the committees.

28. Advisory Committee Rules. Advisory committees formed or utilized by the Air Force will

BIOGRAPHY FORMAT

Date of Resume (should not be more than 6 months old)

PERSONAL DATA

Name

Name of University or Company
Title
Business Address
Business Telephone

Home Address
Home Telephone
Legal Voting Residence

Date and Place of Birth

Citizenship (If naturalized, give date)

Marital Status

Military Service

Education (Degrees, Schools, Dates)

WORK EXPERIENCE

University or Company Assignments (Title, Organization, Dates, Type of Experience)

Consultant Positions

Membership on Boards or Committees

Membership in Professional and Scientific Societies

PUBLICATIONS

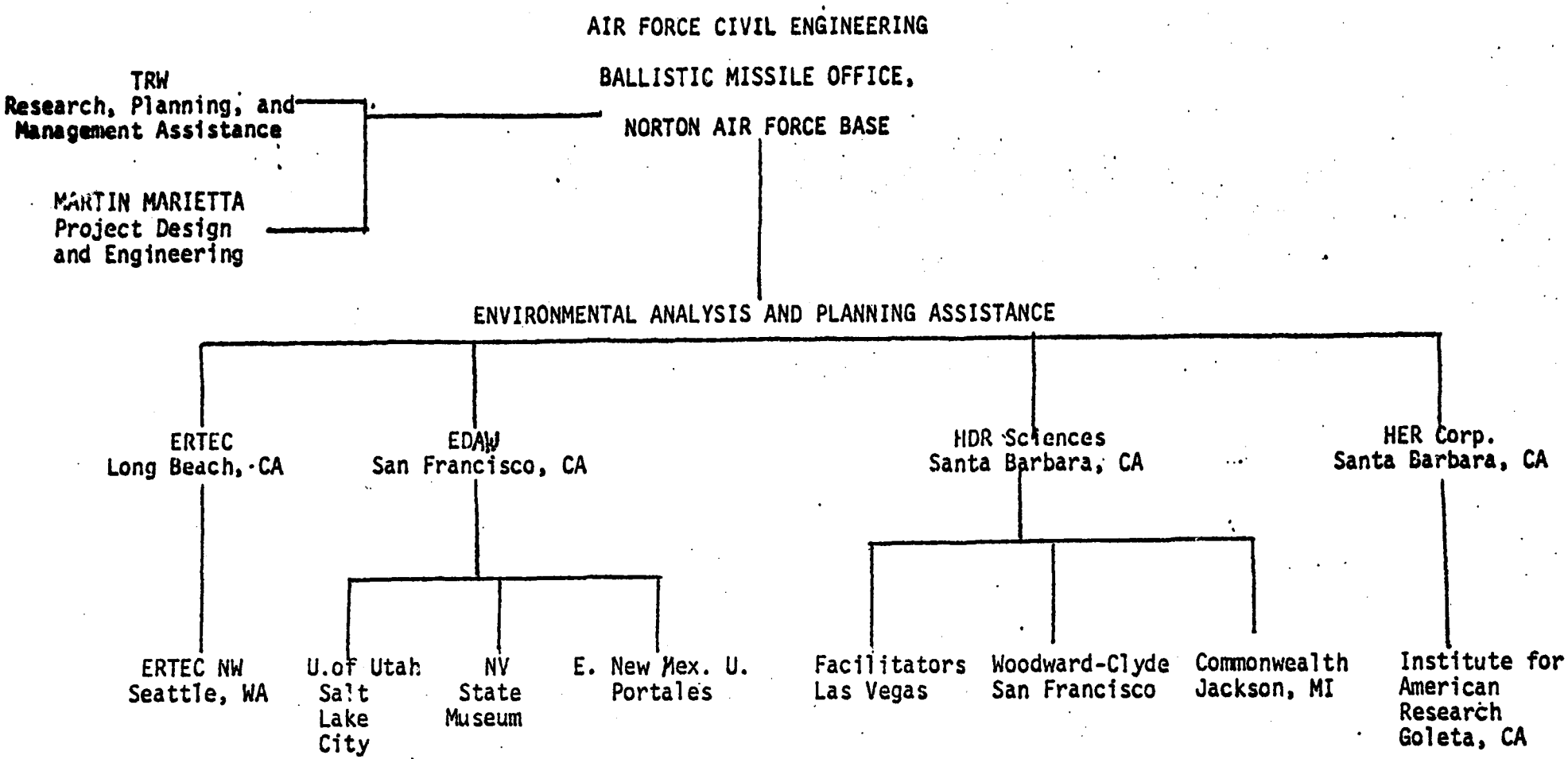
AUTHORITY: Public Law 92-463, Federal Advisory Committee Act, 6 October 1972.

PRINCIPAL PURPOSE: The Office of Secretary of Defense requires that biographical data be furnished on all non-Government personnel nominated to serve on advisory committees. The biographical information is reviewed to assure that proposed nominees are qualified to serve on the committee.

ROUTINE USE: Biographical information is retained for record purposes on individuals approved for service on a committee, upon termination of such service the biographical information is destroyed.

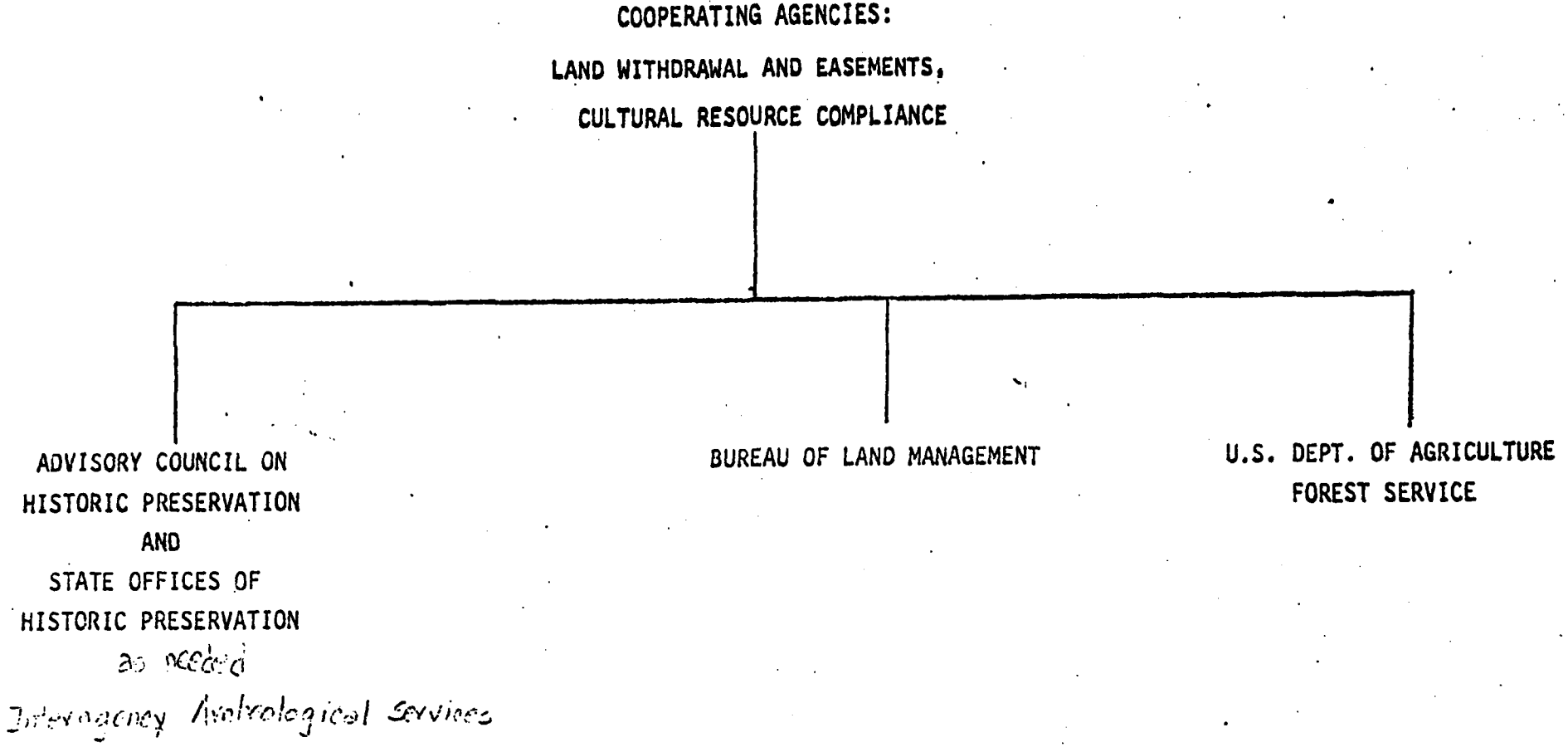
DISCLOSURE IS VOLUNTARY: Disclosure of any information is voluntary, however failure to provide the information will disqualify any proposed nominee.

PRIVACY ACT STATEMENT—BIOGRAPHY FORMAT (AFR 11-36)



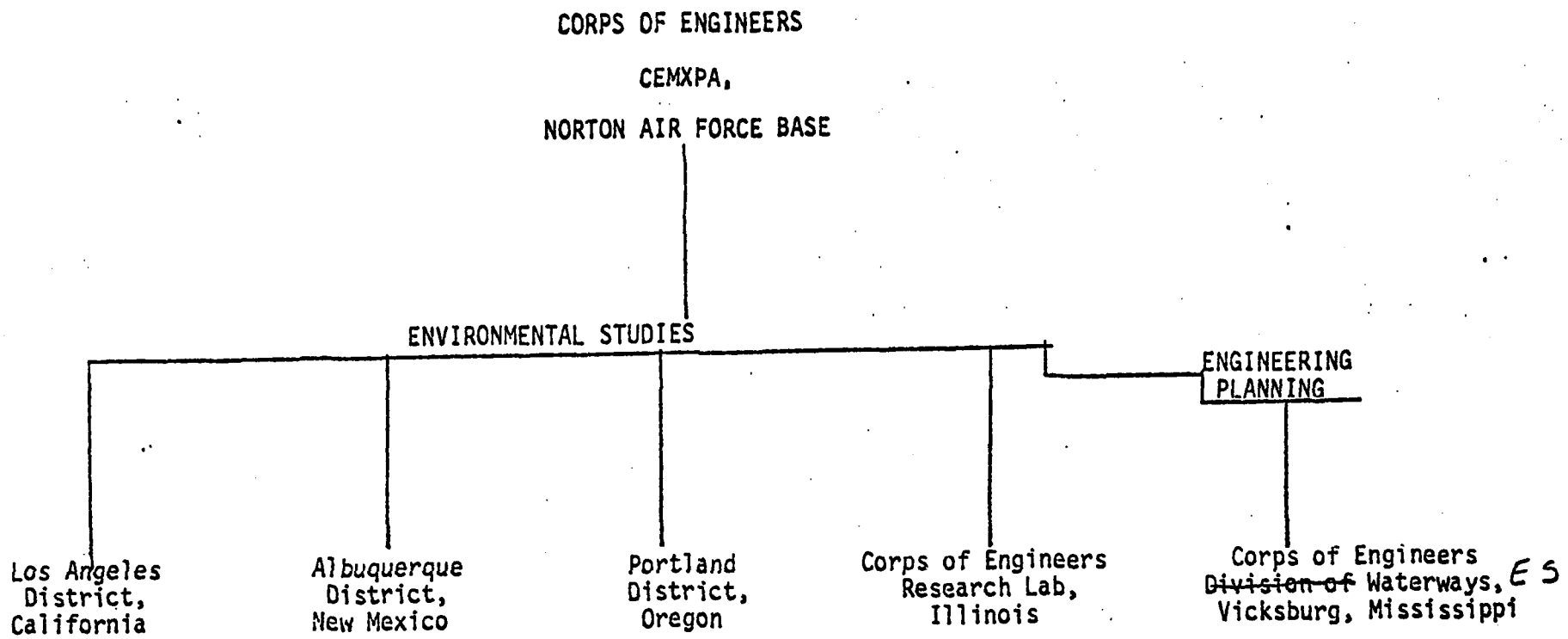
CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS
AND PROJECT PLANNING
MAY 1981

Figure 1, part 1



CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS
AND PROJECT PLANNING
MAY 1981

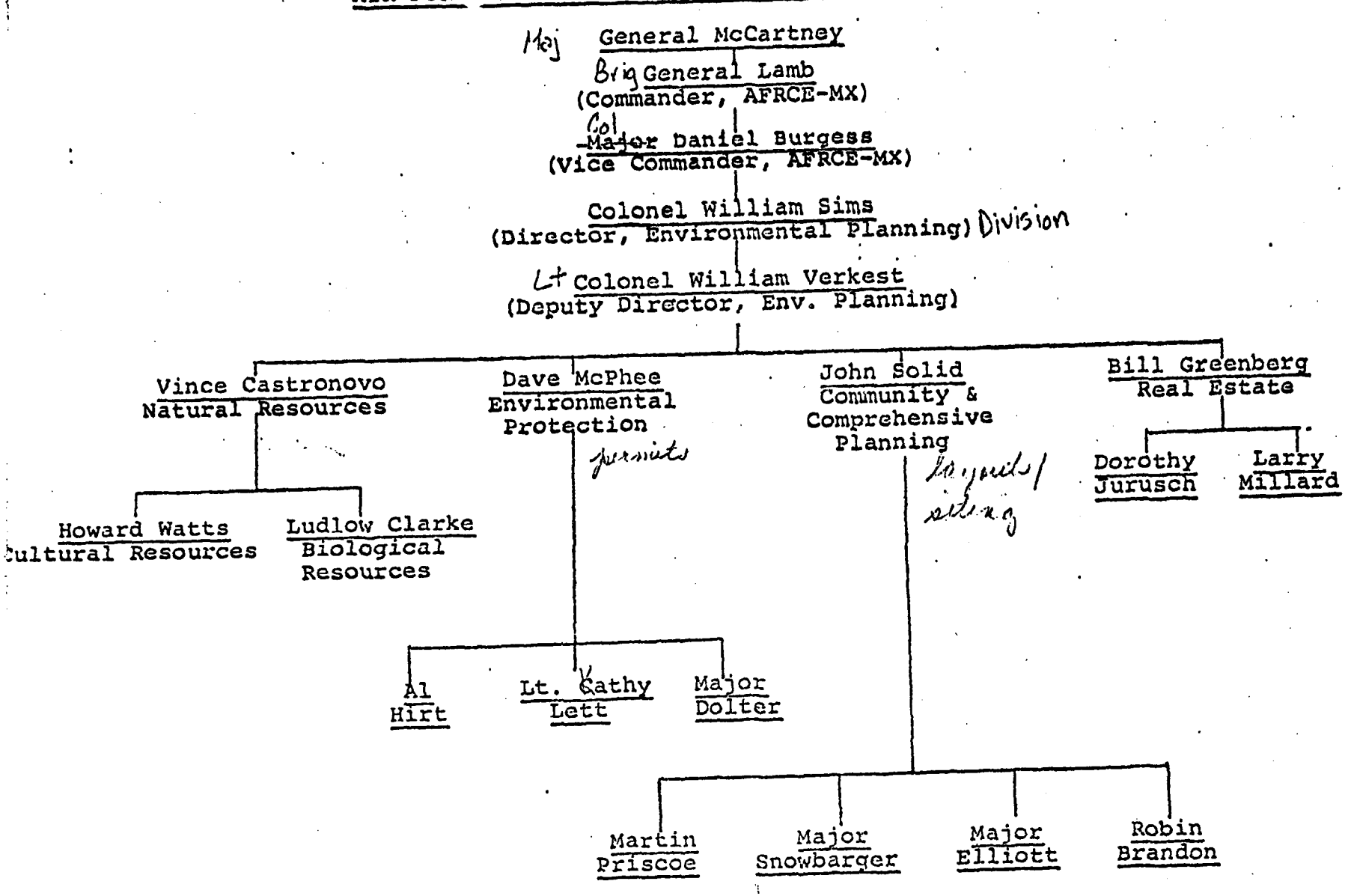
Figure 1, part 2



CURRENT PROJECT PARTICIPANTS IN MX ENVIRONMENTAL ANALYSIS
AND PROJECT PLANNING
MAY 1981

Figure 1, part 3

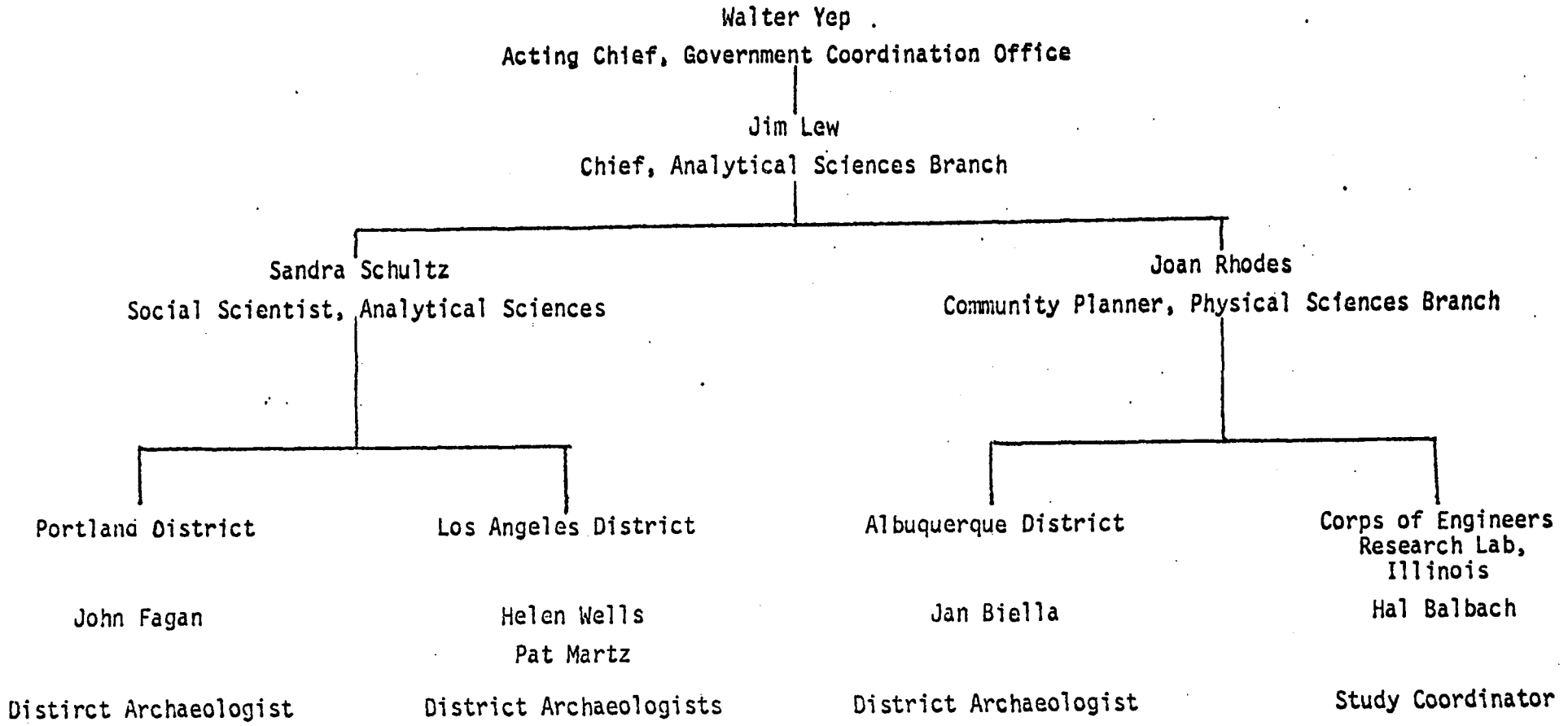
AIR FOR REGIONAL CIVIL ENGINEERING: M-X PROJEC



ORGANIZATIONAL CHART: AFRCE-MX

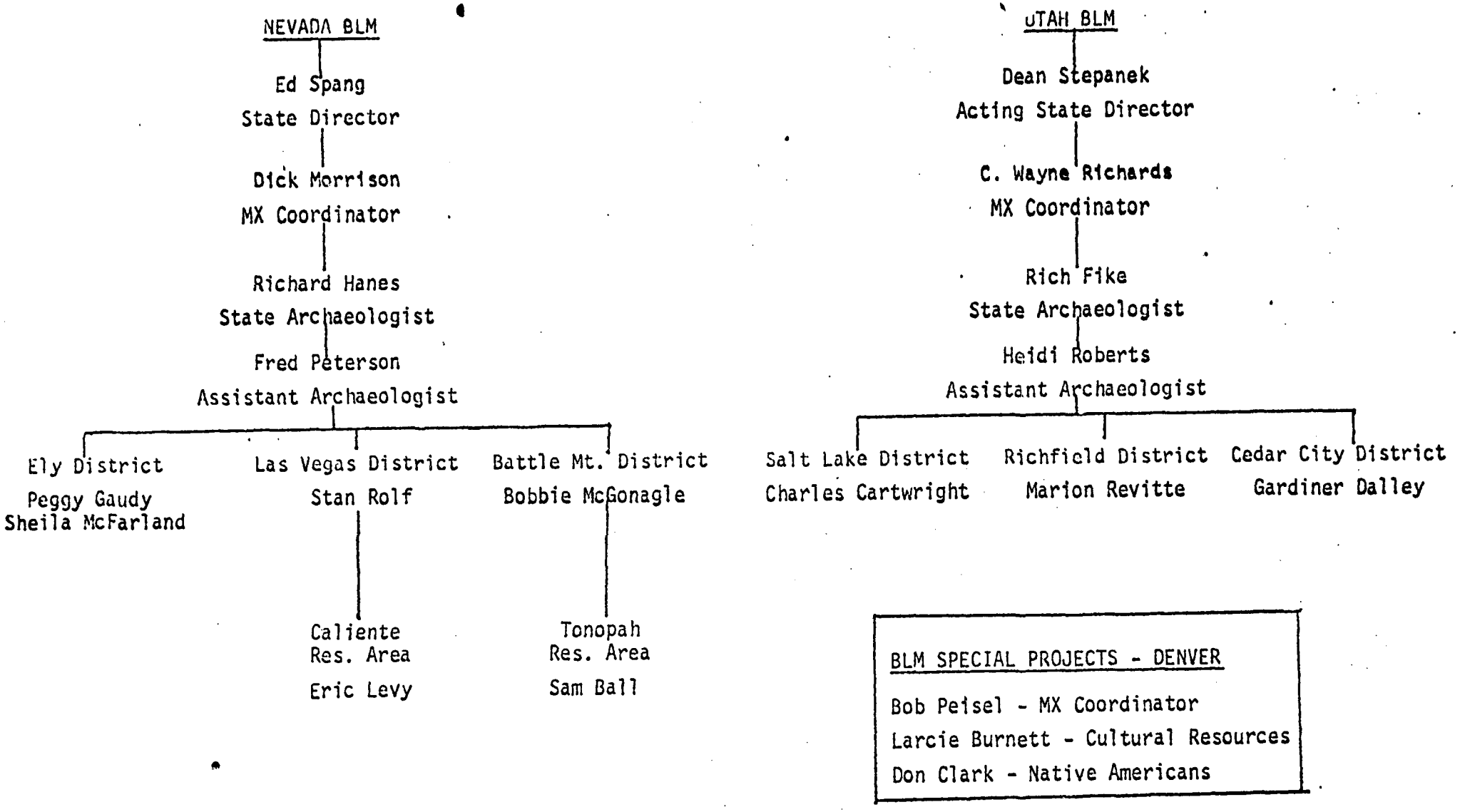
Figure 2

CEMXPA is seeking Divisik X status
districts are cooperating



CORPS OF ENGINEERS MX
COORDINATING OFFICE, & PARTICIPATING DISTRICTS (TIER II ASSESSMENTS)
NORTON AIR FORCE BASE

Figure 3



BUREAU OF LAND MANAGEMENT
MX PROJECT PARTICIPANTS

Figure 4

1.9 ARCHAEOLOGICAL COMPLIANCE PROGRAM

1.1 Types of study programs--focus is on defining study requirements, establishing when in the project implementation process particular types of study are required, and identification of relationships between types of study programs

1.1.1 Research Design--serves to define a set of appropriate research questions for investigation, provides a framework for the conduct of inquiry, identifies appropriate data gathering methods and procedures for answering research questions, and is periodically revised and updated as results from studies become available. Research design is a critical item for the evaluation of significance, for evaluating impacts, for designing mitigation measures.

1.1.2 Class I Inventory--a thorough evaluation of all existing archaeological data, including site records, published and unpublished reports of field studies, and consultation with local/regional experts.

1.1.3 Class II Inventory (Regional Sample Survey)--a sample field inventory designed to identify and record, from surface indications and limited subsurface testing, all cultural resources within a portion of a defined area. The Class II Inventory provides a data base for making objective estimates of the nature and distribution of cultural resources within the defined area (i.e. the sampling universe). This type of study is appropriate in the project planning stages in order to provide information about particular valleys or particular types of environmental settings that are likely to be of high archaeological sensitivity. In addition regional sample survey provides essential information about the regional setting of archaeological resources subject to direct impacts and provides information about the nature and distribution of archaeological resources subject to potential indirect impacts.

1.1.4 Class III Inventory--the systematic, intensive examination of a defined project area to identify and record, from surface indications and limited subsurface testing, all cultural resources. Project areas for Class III inventories are usually defined by the location and expected land disturbance of a particular proposed action. Class III inventories are conducted in order to assess the potential direct impacts on cultural resources of such a project. Because of these limitations on the definition of

project area, the resulting sample frequently is not representative of the larger region. Thus the significance of the cultural resources encountered must be assessed in relation to models that incorporate existing regional data or are based on supplemental Class II Inventory.

1.1.5 Significance Assessment--the Air Force, in consultation with its field contractors and the BLM and SHPOs, must evaluate all archaeological resources discovered during field inventories in terms of their eligibility to the National Register of Historic Places. Two principal types of significance are considered in making National Register evaluations, scientific and cultural significance. The scientific significance of an archaeological resource is generally assessed in relation to a research design that considers problems of general scientific significance, regional and local research problems, and methodologial issues. In significance assessment, attention must also be given to the goal of preserving a representative sample of the full range of archaeological resources, because resources not currently judged to be of significance to regional research problems may become of importance in the future as new information is obtained or new methods are developed. Cultural significance, that is the importance of an archaeological resource to a local community, an ethnic group or to the general public, must also be considered. While scientific significance can be assessed through analysis of data from field inventories as guided by the research design, assessment of cultural significance requires inputs from the other study domains being considered here--history and Native American studies.

1.1.6 Impact Assessment--this is the process by which the probable effects of a proposed action on archaeological resources are evaluated. If a property is significant only for its scientific information, and it cannot be avoided or otherwise preserved, the PMOA specifies that a data recovery program should be implemented as a mitigation measure. For those properties that are significant for other than, or in addition to, their scientific information the impact assessment process requires application of the specific criteria of effect that have been developed by the Advisory Council. These criteria are applied by the Air Force in consultation with their field contractors, the BLM, and the SHPOs.

1.1.7 Mitigation Measures--these may include a variety of actions such as redesign of project elements in order to avoid a significant archaeological resource,

development of protection measures such as fences, or design and implementation of a data recovery program. The design of mitigation measures is closely tied to the process of impact assessment and it requires consultation between the Air Force, its cultural resource contractors, the BLM, and SHPOs.

1.2 Recommended Study Program--this section considers the current status of the MX Project cultural resource studies and recommends studies that should be planned and implemented between now and the end of FY1982.

1.2.1 Research Design Development--a preliminary research design was prepared by Woodward Clyde Consultants that provides a general structure of inquiry for MX archaeological studies. Only one of the several problem domains they identified was developed in the preliminary design. In addition, the results of the Phase 1 Regional Sample Survey have not been incorporated into this design. Furthermore, geographic subregions within the large MX Project area need to be identified and research problems specific to them developed. Field programs and methods appropriate to particular project requirements can then be developed. Significance criteria for National Register evaluations can also be formalized through the research design process.

1.2.2 Class I Inventory--A substantial amount of existing data has already been assembled by MX contractors, however this data base needs to be centralized at AFRCE for the MX Project and should be updated from several sources not previously consulted(e.g. BLM Distfict Offices, Lost City Museum). The BLM has recently completed Class I Inventories for most of the MX Project area--these reports should be used by Air Force cultural resource contractors to the maximum extent possible in order to reduce redundancy of effort.

1.2.3 Class II Inventory--Due to lack of funding, final reports have never been completed by the field contractors that conducted the Phase 1 Regional Sample Survey. Substantial money and effort has been expended in gathering these data, but without analysis and reports these studies contribute very little to the MX cultural resource assessment process. Completion of analysis and reports is of very high priority, for they are required for research design development and planning of a second phase of regional sample survey. The second phase survey should be planned for the entire MX study region (including the mountain zones). Failure to follow up the first phase of fieldwork in a timely

manner has reduced the opportunity to use regional sample survey data to reduce impacts to archaeological resources in early project design stages, however, regional data are essential for identifying potential indirect impact areas and for providing a regional context for evaluating the significance of archaeological resources subject to direct impacts.

1.2.4 Class III Inventory--Class III inventories have been completed in Dry Lake, Pine, and Wah Wah valleys for shelter locations, related facilities, and for a portion of the DTN. Additional survey is currently being planned, but there is inadequate information regarding the types of project facilities or rights-of-way that are to be examined. Apparently cluster roads have not been included in this upcoming program. These and other project elements will require Class III inventories. Similarly there will be Class III inventories required at the Operating Base locations once they have been selected.

1.2.5 Data Recovery Guidelines--the PMOA calls for the early development of a set of general guidelines to be followed during data recovery activities. It is necessary to incorporate these general guidelines into the research design process for guidance and justification of specific data recovery proposals and procedures.

1.3 Schedule--to be developed

1.4 Program Implementation Procedures

1.4.1 Study Team Qualifications--interim guidelines will be those stated in Appendix II of the Nevada BLM publication entitled Cultural Resources Survey: General Guidelines.

1.4.2 Field Forms--for Nevada and Utah the Utah Antiquities form is the official form for recording historic and prehistoric sites. For Class II surveys employing quadrats, the sample unit form for the Phase 1 Regional Sample Survey is to be modified to incorporate improvements suggested by Phase 1 field and lab personnel and to meet the research design requirements of the particular Class II survey. For Class II surveys employing transects, the University of Utah transect form is to be used in its present form, or it may be modified to conform to project requirements. All site forms are to be typed, to have photocopies of the appropriate USGS map showing the site location attached, and to have prints of

site and artifact photos attached on continuation sheets. All photographs are to be recorded in the field on standardized photographic records.

1.4.3 Field Procedures--a field procedures manual is currently in preparation. In the interim, the MX Cultural Resources Regional Sample Survey Field Manual prepared by HDR Sciences and the Institute for American Research, and the field procedures guidelines followed by EDAW subcontractors are to serve as procedural guides. Until an MX field procedures manual is assembled and approved, consultation with the Air Force, BLM, and SHPOs regarding field procedures is essential on a project by project basis.

1.4.4 Data Management--The University of Utah will serve as the centralized data management system for MX archaeological studies in Nevada and Utah. AFRCE-MX will develop and maintain a data base in order to provide planning information to MX environmental and construction contractors on a need to know basis.

1.4.5 Data Dissemination--copies of site and sample unit forms are to be sent to the Nevada State Museum by contractors working in Nevada and to the University of Utah and Southern Utah State University by contractors working in Utah. In addition, copies of these forms go to the SHPO, to the appropriate District Office of the BLM, and to AFRCE-MX.

1.4.6 Report Preparation--all MX cultural resource field studies are to result in the preparation of draft and final reports. Reports on all major field studies are to be published in the cultural resource series of the Nevada BLM. Small scale studies will be distributed to major libraries and data repositories and to all those requesting copies from AFRCE-MX. Report preparation guidelines are being developed.

1.4.7 Curation--official repositories for photographs, negatives, photo records, and artifacts collected during MX archaeological studies are as follows:

Nevada--Nevada State Museum, Carson City
Utah--Southern Utah State University, Cedar City
New Mexico--Laboratory of Anthropology, Santa Fe
Texas--

Presently each contractor is to make arrangements with these facilities on a project by project basis. A long term plan for artifact curation is to be developed.

ATTACHMENT I. STANDARD SEQUENCING FOR CLASS II INVENTORIES

1.0 Prepare SOW for field program--to be prepared by USAF, its prime contractor, or its agent, as appropriate

- 1.1 Define compliance and research goals for proposed Class II study
- 1.2 Identify geographic region of proposed Class II study
- 1.3 Prepare draft SOW (include written statements from 1.1 and 1.2 in SOW)
- 1.4 Provide SOW to USAF for review
- 1.5 Provide SOW to BLM, SHPO, Review Committee for review
- 1.6 Assess and incorporate reviewer comments
- 1.7 Release SOW for bid
- 1.8 Resubmit SOW for review by USAF, BLM, SHPO, Review Committee if significant revisions are made
- 1.9 Review of proposals by Air Force, BLM, and SHPO. Procedures to be established on a procurement by procurement basis.

2.0 Contractor Implements Field Study

- 2.1 Field contractor reviews existing data for the Class II study area
- 2.2 Field contractor contacts appropriate BLM District Archaeologists--field contractor provides project information and requests information on previous/current field studies
- 2.3 Field contractor consults with previous researchers in the Class II study area as appropriate
- 2.4 Field contractor consults with Native Americans
- 2.5 Field contractor develops research design compatible with MX Regional Research Design and appropriate to the particular Class II study area
- 2.6 Class II Research Design is reviewed by USAF, BLM, SHPO, Review Committee
- 2.7 Field contractor visits BLM District Office prior to initiation of field study
- 2.8 Field contractor implements field study in accordance with standardized field procedures for MX Project (see section 1.4 of the Archaeological Compliance Plan).

3.0 Air Force Quality Control Field Monitoring

- 3.1 USAF participates in prefieldwork orientation sessions (optional)
- 3.2 USAF conducts on-site visit(s) during field study

4.0 Field Contractor/Subcontractor Report Preparation Procedures--reports on field studies are to be prepared by the institution, firm, or Air Force agent that conducted the fieldwork

4.1 Field contractor consultation with USAF, BLM, and SHPO regarding field results--initial discussion of significance of resources encountered and review of outline for draft report

4.3 Field contractor conducts analysis to assess significance of all cultural resources encountered and to develop predictions about unsurveyed areas within the sampling universe. Draft report presents results of analyses and recommends research design refinements/modifications. Indirect impact analyses are reported if that was a compliance goal of the Class II Inventory (see 1.1).

4.4 Draft report is reviewed by USAF, SHPO, BLM, and Review Committee

4.5 Based on reviewer comments field contractor prepares final report

4.6 After final review report is published in Nevada BLM cultural resource series

ATTACHMENT II. STANDARD SEQUENCING FOR CLASS III INVENTORIES

1.0 Prepare SOW for field program--to be prepared by USAF, its prime contractor, or its agent, as appropriate

- 1.1 Define proposed Air Force Action
- 1.2 Identify geographic region of potential effect
- 1.3 Identify cultural resource compliance requirements for proposed action--SHPO/BLM consultation advisable
- 1.4 Integrate 1.3 with regional research design
- 1.5 Provide SOW to USAF for review
- 1.6 Provide SOW to BLM, SHPO, Review Committee for review
- 1.7 Assess and incorporate reviewer comments
- 1.8 Release SOW for bid
- 1.9 Resubmit SOW for review by USAF, BLM, SHPO, Review Committee if significant revisions were made
- 1.10 Review of proposals by Air Force, BLM, and SHPO. Procedures to be established on a procurement by procurement basis

2.0 Contractor Implements Field Study

- 2.1 Field contractor reviews existing data for the Class III study area
- 2.2 Field contractor contacts appropriate BLM District Archaeologists--field contractor provides project information and requests information on previous/current field studies
- 2.3 Field contractor consults with previous researchers in the Class III study area as appropriate
- 2.4 Field contractor consults with Native Americans
- 2.5 Field contractor develops research design compatible with MX Regional Research Design and appropriate to the particular Class III study area
- 2.6 Class III Research Design is reviewed by USAF
- 2.7 Field contractor visits BLM District Office prior to initiation of field study
- 2.8 Field contractor implements field study in accordance with standardized field procedures for MX Project (see section 1.4 of Archaeological Compliance Program)

3.0 Air Force Quality Control Field Monitoring

- 3.1 USAF participation in prefieldwork orientation sessions (optional)
- 3.2 USAF on-site visit(s) during field study

4.0 Field Contractor/Subcontractor Report Preparation Procedures--reports on field studies are to be prepared by the institution, firm, or Air Force agent that conducted the fieldwork

4.1 Field contractor consultation with USAF, BLM, and SHPO regarding field results--initial discussion of significance, impacts, and potential avoidance measures
4.2 USAF determines which avoidance measures are possible
4.3 Field contractor prepares report to assess significance of all cultural resources encountered and identify potential impacts. Draft report incorporates results of Air Force decisions regarding avoidance measures.
4.4 Draft report is reviewed by USAF, SHPO, BLM, and Review Committee
4.5 Based on reviewer comments USAF develops final avoidance measures
4.6 Field contractor prepares final report assessing significance, impacts, avoidance measures, and outlines data recovery program. All National Register eligible properties subject to impacts are documented in accordance with 36 CFR 63
4.7 SHPO comments on determinations of eligibility
4.8 If SHPO concurs with determinations of eligibility, and all cultural resources are eligible for the Register only for their information potential, USAF finalizes its data recovery program plan (Go to Attachment III)
4.9 If any cultural resources are eligible for the Register for reasons other than, or in addition to, their information potential USAF makes a determination of effect in consultation with the SHPO and forwards appropriate documentation required by 36 CFR 800.4(d) to the Advisory Council for comment.

5.0 Advisory Council Consultation

5.1 USAF prepares and submits a Preliminary Case Report requesting the comments of the Council(see 36 CFR 800.13(b)
5.2 USAF notifies the SHPO of this request
5.3 USAF proceeds with the consultation process set forth in 36 CFR 800.6
5.4 Until the completion of the consultation process, the Air Force suspends any actions that may result in impacts to the property under consideration

ATTACHMENT III. STANDARD SEQUENCING FOR DATA RECOVERY PROGRAMS

To be developed

I Native American Compliance Program

A. Types of Study Programs

Regional Program Plan

The program plan will establish methodlogies and procedures for evaluating the cultural and historic significance of Native American resources which are eligible for the National Register and/or protected by the American Indian Religious Freedom Act.

Literature Search

Background studies consist of a review of existing ethnographic and ethnohistorical literature on the study area region, and of existing archaeological site records which contain information on cultural resources in the deployment area of potential significance to Native Americans.

Regional Survey

Ethnographic field studies at Indian reservations and colonies in and near the deployment area are conducted to determine the nature, known and projected distribution, significance, and contemporary use patterns of cultural resources in the potentially impacted region.

Site-Specific Surveys

Site-specific surveys consist of on-site inspections of areas slated for construction by ethnographer-Native American study teams to record cultural resources subject to potential direct and indirect impacts.

Significance Assessment

Assessment of the significance of Native American resources in the deployment area requires the development, in consultation with affected tribal groups, of relevant and defensible criteria for establishing the relative importance of tangible and intangible resources for the maintenance of cultural integrity. These guidelines must be in accordance with cultural and historic significance determinations relevant to National Register eligibility and religious freedom.

Impact Assessment

The impact analysis has two major components. Assessment of potential impacts on tangible cultural resources involves the comparison of known resource distributions with project layouts. Potential project impacts on intangible cultural resources, such as those which jeopardize religious expression or ethnic integrity, must be assessed through a consideration of the cumulative effects of significant resource loss on Native American communities.

Mitigation Measures

Mitigation programs consist of the development of measures, in consultation with affected Native American groups, which facilitate avoidance or minimization of deleterious project effects on tangible and intangible cultural resources.

B. Recommended Study Program

Program Plan Development

There is an immediate need for the development of standardized procedures for identifying and assessing the relative significance of Native American cultural resources. The accuracy and validity of such procedures or guidelines is dependent upon the establishment of a successful dialogue and working relationship between affected Native American groups, participating agencies, and M-X contractors.

Literature Search

It is recommended that background studies initiated with the M-X DEIS be updated to include the results of preliminary regional ethnographic surveys, Class I and II archaeological inventories, and tribal comments on the DEIS. Such studies should be expanded to include the unpublished data of ethnographers with areal specializations in the deployment area, Native American tribal archival data, and additional published works (particularly for the Texas/New Mexico siting alternative).

Regional Survey

Finalization and completion of the FY 80 Nevada/Utah ethnographic survey are recommended as high priorities. Finalization of the initial study report includes tribal group and agency comments and the identification of significant data gaps. Completion of the regional ethnographic survey is required to determine the range of cultural resources in the deployment area, their significance to Native Americans, and contemporary use patterns. Since no comparable data are currently available for the Texas/New Mexico siting option, contacts with the tribal governments of affected Native Americans in this region and initiation of a regional ethnographic survey are recommended.

Site-Specific Surveys

It is recommended that on-site inspection of proposed construction areas in the IOC valleys, OB sites, construction camps, borrow sites, and other disturbance areas be conducted by study teams composed of ethnographers and local Native Americans. Such studies should be a routine component of any and all cultural resource inventories to ensure the identification and recordation of Native American resources and documentation of their historic and cultural significance to local peoples.

Data Recovery Guidelines

Established procedures for data recovery prior to ground disturbance should be developed jointly between cultural resource and land management agencies and affected Native American groups. Such procedures should include prior notification to tribal governments of data recovery programs and reflect a sensitivity for Native American religious concerns. These mitigation guidelines are a logical extension of consultation forums initiated for program plan development.

Program Implementation Procedures

A. Consultation Requirements

Tribal Governments

As official governing bodies of sovereign nations in a special trust relationship with the United States, the duly-elected tribal councils/business councils of affected Indian reservations and colonies in the deployment area serve as legal representatives and liasons with external agencies and interest groups. Consultations required by existing cultural resource legislation which relate to Native American participation in the inventory, impact assessment, and mitigation processes must therefore be coordinated with these bodies.

Native American Traditional Leaders

In addition to consultation with tribal governments, implementation of the American Indian Religious Freedom Act requires coordination with traditional religious leaders within Native American communities to determine the nature, distribution, and significance of sacred cultural resources, to assess potential impacts on these resources, and to develop suitable mitigation measures.

Cultural Resource Management Agencies

Procedures for coordination with the State Historic Preservation Officers and Bureau of Land Management for the determination of effect on Native American cultural resources and the eligibility of these resources for the National Register are identical to those followed for the archaeological compliance program.

B. Field Procedures Guidelines

Study Team Qualifications

Due to the culturally unique and often sensitive nature of many Native American cultural and sacred resources, data gathering is successful only when conducted by a research team

which enjoys the confidence of both the academic and Indian communities. It is therefore recommended that: (1) Native Americans be consulted on the selection of the ethnographic survey contractor, (2) that this selected contractor conduct all cultural resource studies relating to Native Americans for M-X contractors, either sequentially or simultaneously, and (3) that the direct participation of local Native American cultural resource specialists on study teams be instituted for site-specific surveys.

Field Forms

Since data gathering on Native American cultural resources is accomplished through ethnographic interviewing, field forms distinct from those employed in archaeological surveys are required. Forms developed in the context of DEIS preliminary regional surveys should be evaluated and revised in light of research team recommendations and tribal comment. Revised field forms should be universally applied by research teams in subsequent studies to permit the standardization of data.

Field Procedures

Minimal guidelines for ethnographic data gathering on Native American cultural resources include: (1) initial contact with tribal governments by research team members for information dissemination on study goals and the receipt of permission to interview tribal members, (2) consultation with all tribal members knowledgeable in traditional matters and cultural resources, and (3) establishment of a tribal review procedure for evaluation of study findings prior to finalization of research reports.

Photographic Documentation

The systematic photographing of cultural resource sites, a standardized procedure in archaeological inventories, should be extended to Native American surveys as well. A photographic record of sites which are culturally significant to Native Americans will document their physical properties and condition prior to potential direct and indirect impacts associated with the M-X project.

C. Data Management

AFRCE

There is an immediate need for the establishment of a centralized data repository for cultural resources of all types at AFRCE. Such a repository will facilitate data analysis, and will provide rapid access to Native American cultural resource information for planning purposes. Since

certain categories of Native American sites are regarded as sacred, and their locations divulged only with guarantees of informant or data confidentiality, provisions for nondisclosure of such information to the public must be developed.

BLM

Dissemination of Native American cultural resource data to the Bureau of Land Management has not occurred to date. Preliminary field studies indicate a general lack of faith exists in the Indian community regarding the ability of the BLM to maintain Native American site data confidentiality. Further consultation between this agency and tribal governments is necessary to ensure such procedures are followed.

Tribal Archives

The highly sacred nature of certain Native American cultural resources often precludes their discussion with non-Indians. Reluctance to disclose information on either the precise nature or location of such resources is guided both by cultural sanctions and the fear of potential site damage or desecration. Tribal archives provide a data repository for the preservation of traditional knowledge for future reservation members. Such information, to which public access is controlled by the tribes, may be disclosed on a selective basis to project planners if the resource appears threatened by direct or indirect disturbance, or if procedures which guarantee data confidentiality can be developed by AFRCE and the BLM in consultation with the tribes.

D. Data Dissemination

Planning Information for DOD Contractors

Centralization of deployment area Native American cultural resource data at AFRCE will allow immediate access by DOD contractors for planning purposes. Additionally, an ongoing consultation program between AFRCE and tribal governments will facilitate the coordination of data gathering efforts by contractors, and provide a mechanism for the dissemination of information on highly sensitive resources from the tribes to AFRCE on a case-by-case or site-specific basis.

Scientific and Public Information Dissemination

Since the gathering of Native American cultural resource information in M-X ethnographic studies is properly represented to the tribes as a planning tool, and since much of this information is regarded by the tribes as proprietary, site-specific data disclosure to the scientific community and general public should be granted only at the discretion of the tribes in question. The official tribal position on data disclosure for specific sacred and secular resources identified by reservation

members may be indicated in the tribal review of draft ethnographic field reports.

E. Curation

Data Repositories and Photographs

Acceptable data repositories for Native American cultural resource information is an important area for negotiation between AFRCE, the BLM, and affected tribes. As noted above, the secular or sacred nature of resources and data confidentiality are important issues.

Artifacts

Consultation with affected tribes is urgently needed for the development of mutually agreeable mitigation measures. This is particularly relevant to data recovery programs which may involve the disturbance of highly sensitive resources, such as human skeletal remains, sacred artifacts, and organic and inorganic materials which have traditional religious significance. Curation of artifacts at tribal museums is a potential mitigation measure, although substantial funding would be required for the development of reservation facilities which meet BLM requirements for artifact transfer to local Native American groups.

ATTACHMENT I STANDARD SEQUENCING FOR REGIONAL ETHNOGRAPHIC SURVEYS

1.0 Prepare SOW for Regional Program - to be prepared by USAF, its prime contractor, or its agent, as appropriate.

- 1.1 Define compliance basis for the study and relation to environmental impact process, land withdrawal, or other actions.
- 1.2 Define special legal considerations arising from trust status which may influence the scope of study.
- 1.3 Determine what level of integration with archaeological/historical Class II inventories is required.
- 1.4 Identify region, colonies, reservation, and traditional communities in off-reservation area relevant to the proposed actions and studies.
- 1.5 Prepare draft SOW.
- 1.6. Provide draft SOW to USAF for review.
- 1.7 Provide SOW to cultural resource management agencies, PMOA Review Committee, the BIA, and pertinent tribal governments for review.
- 1.8 Assess and incorporate reviewer comments and resubmit SOW for review if appropriate.
- 1.9 Release SOW for bid.

2.0 Contractor Implements Ethnographic Study

Contractor actions include:

- 2.1 Review of existing data.
- 2.2 Consultation with appropriate cultural resource management agencies and tribal governments and integration of information on previous and current related investigations.
- 2.3 Consultation with prior researchers and contractors as appropriate.
- 2.4 Development of a study plan compatible with the Native American studies regional program plan and procedures for significance assessment and consultation.
- 2.5 Submission of study plan for review by cultural resource management agencies, USAF, tribal governments, traditional leaders and review committee.
- 2.6 Incorporation of comments as appropriate
- 2.7 Consultation with local BLM and BIA offices prior to initiation of field study.
- 2.8 Implementation of field study in accord with standards and procedures developed in the PMOA management plan.

3.0 Air Force Quality Control Field Monitoring--To maintain the quality of studies, the USAF or its designated agent or contractor should:

3.1 Participate in pre-fieldwork orientation sessions.
3.2 Conduct limited on-site visits during field study.
3.3 Revise procurements as required if significant problems arise in completing studies as defined in the SOW.

4.0 Ethnographic Subcontractor Report Preparation Procedures--Reports should be prepared by the institution, subcontractor, or USAF agent who conducted the ethnographic fieldwork. The steps to be followed in the preparation of reports include:

4.1 Consultation with cultural resource management agencies and tribal governments regarding field results - initial discussion of the significance of resources encountered and review of draft report outline.

4.2 Analysis of the data to assess the significance of all cultural and heritage resources identified and to assess concerns relating to the Native American Religous Freedom Act. Analysis should emphasize areas and topics requiring further study. Draft Report presents results and recommends modifications necessary to implement Class III (site specific) inventory and mitigation planning.

4.3 Draft report is reviewed by cultural resource management agencies and tribal governments and traditional leaders as appropriate.

4.4 Comments are incorporated during preparation of final report.

4.5 After final review, report is published in appropriate ethnographic cultural resource series.

STANDARD SEQUENCING FOR SITE SPECIFIC INVENTORIES

1.0 Prepare SOW for Regional Program - to be prepared by USAF, its prime contractor, or its agent, as appropriate.

1.1. Define compliance basis for the study and relation to environmental impact process, land withdrawal, or other actions.
1.2 Define special legal considerations arising from trust status which may influence the scope of study.
1.3 Determine what level of integration with archaeological/historical Class III inventories is required.
1.4 Based on the Class II study and other information, identify region, colonies, reservation, and traditional communities living off reservation relevant to the proposed actions and studies.
1.5 Prepare draft SOW.
1.6. Provide draft SOW to USAF for review.
1.7 Provide SOW to cultural resource management agencies, PMOA Review Committee, the BIA, and pertinent tribal governments for review.
1.8 Assess and incorporate reviewer comments and resubmit SOW for review if appropriate.
1.9 Release SOW for bid..

2.0 Contractor Implements Ethnographic Study--Contractor actions include.

2.1 Review of existing data from Class II inventory.
2.2 Consultation with appropriate cultural resource management agencies and tribal governments and traditional leaders integrating information on previous and current related investigations.
2.3 Consultation with prior researchers and contractors as appropriate.
2.4 Development of a study plan compatible with the Native American studies regional program plan and procedures for significance assessment and consultation.
2.5 Submission of study plan for review by cultural resource management agencies, USAF, tribal governments, traditional leaders and review committee.
2.6 Incorporation of comments as appropriate.
2.7 Consultation with local, BLM and BIA offices prior to initiation of field study.
2.8 Implementation of field study in accord with standards and procedures developed in the PMOA management plan.

3.0 Air Force Quality Control Field Monitoring--To maintain the quality of studies, the USAF or its designated agent or contractor should:

3.1 Participate in pre-fieldwork orientation sessions.
3.2 Conduct limited on-site visits during field study.
3.3 Revise procurements as required if significant problems arise in completing studies as defined in the SOW.

4.0 Ethnographic Subcontractor Report Preparation Procedures--Reports should be prepared by the institution, subcontractor, or USAF agent who conducted the ethnographic fieldwork. The steps to be followed in the preparation of reports include:

4.1 Consultation with cultural resource management agencies and tribal governments and traditional leaders regarding field results - initial discussion of the significance of resources encountered, impacts anticipated, and potential mitigation measures.
4.2 USAF determines what avoidance measures can feasibly be implemented.
4.3 Analysis of the data to assess the significance of all cultural and heritage resources identified and to assess concerns relating to the Native American Religous Freedom Act. Analysis should emphasize comprehensive significance assessment, detailed impact assessment, and development of mitigation alternatives. Draft Report incorporates results of USAF decisions regarding avoidance measures. The draft report should contain mitigation planning information concerning all areas to be impacted.
4.4 Draft report is reviewed by cultural resource management agencies, review committee, and tribal governments and traditional leaders as appropriate.
4.5 Comments are incorporated during preparation of final report. The contractor's final report should assess significance, impacts, avoidance measures, other mitigation measures, and should outline a program for integration of Native American concerns with archaeological data recovery programs. All National Register eligible properties subject to impacts should be documented in accordance with 36 CFR 63.

5.0 Compliance Coordination for National Register Eligible Properties--Native American cultural or heritage sites eligible for inclusion in the National Register probably will have significance beyond their information potential and archaeological research values. For this reason, Advisory Council consultation will be required. The most expedient approach to this consultation would involve the following steps:

5.1 USAF consults with appropriate cultural resource management agencies and makes a determination of effect. Documentation of the effect determination should be prepared in accord with 36 CFR 800.4(d). This documentation should contain all the information relevant to each major construction increment to be accomplished during the forthcoming fiscal year.

5.2 A single Preliminary Case Report requesting the comments of the Council (see 36 CFR 800.13(b)) should be prepared. This case report should be as comprehensive as possible.

5.3 USAF notifies SHPO of the request for comments from the Council.

5.4 Until the consultation process is concluded, actions which may result in impacts to the eligible property should be deferred.

2.6. HISTORY/ARCHITECTURE/COMMUNITY STUDIES COMPLIANCE PROGRAM

2.1. Types of study programs

2.1.1. Research Design. There are three basic steps to any research design or, more generally, planning program. These are:

2.1.1.1. identification of projects goals or a problem to be solved. For the history/community studies compliance program, the principal goals are: 1) the identification of historical, architectural, and/or socio-cultural resources that may be affected by MX deployment; 2) determining the significance of these resources and, more specifically, their evaluation for inclusion on the National Register; and 3) the protection/mitigation of these resources.

2.1.1.2. determination of the steps or measures to be taken to achieve these project goals. For history/community studies, these steps include: 1) review of existing literature and other background studies; 2) consultation with regional experts and authorities; 3) the development of significance criteria that are suitable to the project area and its cultural resources IN consultation with the local community; 4) documentation of architectural values and other field studies; 5) significance assessment; 6) impact assessment; 7) the development of practical and effective mitigation measures, in cooperation with local populations; 8) plans for monitoring the implementation of these measures.

2.1.1.3. planned re-evaluation of the program at key stages in its implementation. A number of factors may develop which call for changes in the research design/management plan. As the body of cultural resources data develops, for example, new data needs may also appear; or changes in the MX deployment picture may demand the inclusion of other areas in the planning process. This third step in the planning process is when the project goals and the steps necessary to achieve those goals are further refined. It is important to point out that this evaluation process should employ an explicit data analysis program.

2.1.2. Background Studies

As soon as a basic set of project goals have been identified, background studies are normally the first

type of data gathering/synthesizing program to be initiated. For history/community studies, this type of research would involve the use of written materials, including both primary (diaries, letters, journals, autobiographies, deeds, permits and other regional records) and secondary (histories and existing background studies) sources, other documentary sources such as photographs and maps, and consultations with regional experts in history, architecture, and social anthropology.

The main objectives of these studies are to identify gaps in the existing data base, to assist in the formulation of significance criteria, and to provide contextual information on which significance evaluations can be based. It would be appropriate to organize these on a regional basis, rather than a chronological or topical basis, for example.

These background materials differ in terms of cost/benefit ratios. Thus it would not be unusual for some preliminary background investigations to be based on secondary source material and expert consultations, followed by more detailed research with primary materials. It is likely that some preliminary field programs would be initiated before studies of all relevant background materials are completed.

It is important that these background studies be closely aligned with the research design/planning process. This demands that the background studies be designed so that they will contribute toward achievement of the project goals. Additionally, the results of these studies must be used to revise and refine the research design when this is called for.

The field study programs should be based on the existing data reviews to a maximum extent. Moreover, since these programs are likely to be multi-stage in character, future stages should be built upon the results of earlier stages.

2.1.3. Field Studies

Field studies involve on-the-spot documentation of historical, architectural or socio-cultural resources. The methods appropriate to these field studies are: i) on-site written and photographic recordation of buildings and other architectural properties; ii) neighborhood surveys; oral history and other interviewing; iii) archaeological survey and testing.

As with the background studies, these different types of field investigations also differ in terms of the

ease with which they may be performed and their relative contributions to the project goals. These factors should play an important role in scheduling and other prioritizing.

It should be pointed out that many significant cultural resources in the history and community studies areas may not be easily observed through a cursory public reconnaissance. These include aspects of material culture found among the personal possessions of area residents, folklore, aspects of social organization and kinship, subsistence methods and other practices and techniques, and so on.

The field studies should be conducted by qualified researchers, using an established set of measurement and other procedures and criteria, to ensure comparability across studies.

2.1.4. Significance Assessment. There are three basic steps for a significance assessment in history/community studies. These are:

2.1.4.1. determination of appropriate units for significance evaluation. Such units may be buildings, sites, structural features, records, objects or other artifacts, districts or other spatial units.

2.1.4.2. identification of significance criteria suitable to the study area. This will involve use of National Register eligibility criteria, consultation with regional experts and authorities, evaluations of data from the background and field studies, and interviewing or using other means for assessing values attached by local populations (i.e. "cultural significance").

2.1.4.3. application of the significance criteria to the assessment units. This requires a unit by unit evaluation with respect to the various significance criteria. Eligible National Register properties should be clearly differentiated.

2.1.4.4. development of sensitivity maps or other graphic depictions of significance which may be used directly in the impacts assessment.

2.1.5. Impact Assessment. Impacts assessment is basically a process of comparing project impact areas with resource locations. It requires a sensitivity, however, to the kinds of effects that a particular construction or activity will have on a particular kind of cultural resource. This, in turn, demands an understanding of

the forces or factors operating to maintain the resource in its present condition and what alterations in those forces or factors are likely to mean for the resource. Obviously, when one is dealing with currently-used buildings, sites or objects, these forces are quite different, more complex, and often more fragile than in the case of abandoned cultural or historic remains. It should also be noted that, under the proper conditions, some impacts might actually be beneficial to the preservation of particular resources (For example, population growth might permit the rehabilitation and adaptive reuse of more historic buildings, as museums, homes, offices and so on). In considering types of impacts, it is particularly important to differentiate between resources located in inhabited versus uninhabited areas.

In the case of direct project impacts, assessment of impacts consists of overlaying project and resource locations and counting or otherwise measuring the volume of direct impacts that will result, again with a sensitivity to the kinds of impacts that given activities will have for specific resource types.

With indirect impacts, the situation is much complicated by the fact that there is no concrete measure of such indirect project effects. Rather, models of indirect impacts must also be developed. Such models are normally based on permanent and temporary population figures (including recreational and other travel visitors), access routes, and distance-decay assumptions regarding impacts. Once again it is important to determine the type or degree of impact that a particular activity will have on given types of cultural or historic resources.

2.1.6. Mitigation Measures

A variety of mitigation measures are appropriate to the various kinds of cultural resources that belong to the history/community studies area. These include curation, exhibition, avoidance, community planning, study, restoration, rehabilitation, adaptive reuse, interpretation and educational programs, data recovery, design guidelines for new construction, and so on. In the case of objects or buildings whose significance rests with their continued use, mitigation might involve measures such as socio-economic aid to offset other project effects which may threaten such continued uses.

The mitigation program should also include the establishment of criteria for applying these various mitigation alternatives. It would be appropriate to

conduct as much prior-planning in this area as possible, in consultation with the community and local/regional planning agencies, to ensure that the mitigation program is cost effective and that the measures used in any area complement rather than detract from one another.

An integral part of the mitigation plan should be the establishment of monitoring procedures to be used to ensure compliance with the mitigation program, and contingency measures in the event of non-compliance.

2.2. Recommended Study Program/FY82

2.2.1. Research Design Development. Research design development is the first and most crucial step recommended for a FY 82 study program. Separate designs for each of the potentially affected study areas should be completed. These designs should include the following elements:

2.2.1.1. the preparation of a general research problem or focus, within which more specific research designs may be oriented and developed. This design identifies the problem domains that are to addressed in subsequent research phases, for example, historic settlement, the development of economic networks.

2.2.1.2. a clear statement of overall project objectives, including those that cannot be met in this phase of study.

2.2.1.3. identification of those particular objectives which will be met during this phase. Given the status of the history/community studies compliance program, it is expected that the FY 82 research design will place a major emphasis on:

1. background studies, particularly the coordination of existing Class I inventories, National Register district nominations, and other technical secondary sources, with the goals of identifying data gaps and of establishing a standardized format for data collection, synthesis, evaluation and storage.
2. proposed OB and IOC areas
3. field reconnaissance for architectural values
4. development of a data management system

2.2.1.4. a rationale as to why these specific objectives were selected for inclusion during this phase, while others were not. An important part of this rationale should be an explanation of how this phase of work will link with and contribute

to the implementation of subsequent phases.

2.2.1.5. a statement of procedures to be used to achieve these objectives, including background research, field studies, consultations w/regional experts, and so on, as appropriate.

2.2.1.6. a discussion of anticipated results and how these will serve the stated objectives

2.2.1.7. a program timetable

2.2.2. Background Studies

More specific identification of background studies for FY 82 will need to wait until a research design has been finalized. The following outline is suggested for review.

2.2.2.1 Regional level studies will include 1) a cultural/historical overview of the potentially affected region, 2) an architectural overview that discusses architectural style, function, quality, and integrity that characterizes the utilitarian, vernacular, and grand architecture of the region under study, and 3) completion of the Class 1 inventory of potential historic properties begun for Nevada/Utah.

2.2.2.2 Community level studies will include 1) research into the developmental history of the community, major historical events, major historical figures, the ethnic/cultural/religious heritage of the community and the history of land-use and architecture as it pertains to this heritage, current land-use and architectural trends, and cultural continuity; 2) research into the current social, financial, and legal infrastructure of the community as it might affect historic preservation; and 3) community perceptions of its historic heritage to evaluate the cultural significance of properties.

2.2.3. Field Studies

These will undoubtedly need to focus on the IOC and OB areas. Until the FY 82 research design is completed, further discussion of these field study programs must also be delayed. An outline of how these studies could proceed is presented for review.

2.2.3.1 Inventory and documentation of historic resources. Three phases of study are proposed. Phase 1 would include a quick reconnaissance survey of the historical and architectural character of the community to define generally building style and function, and potential districts and individual buildings that merit

further investigation. Phase 2 would include the selection and documentation of those districts and buildings considered architecturally and historically significant. Phase 3 would include an archaeological survey of those areas in the community that are expected to be developed to accomodate population growth.

2.2.4. Preservation Planning

This involves the development of a preservation plan for the affected community which incorporates the results of the background studies and the field inventories. The plan would be developed with the full participation of the community and municipal authorities. The plan would consider National Register nominations, maps of significant historic properties and districts, a program for the rehabilitation of historic properties, design guidelines for new construction to enhance the visual continuity and historic character of the community, zoning recommendations to mitigate the effects of growth, archaeological investigations required prior to new construction, and possible reconstruction of historic districts. Community particpation and education programs would continue through the development of the plan. A final report would compile all the information gathered as a result of these studies.

2.2.5. Schedule

The schedule of activities must also be a part of the research design. Needless to say, time is a crucial factor in the compliance program, due to the bearing that MX has on national security, as well as to other considerations.

2.3. Program Implementation Procedures

2.3.1. Consultation Requirements. There are a number of agencies and individuals that should be consulted throughout the implementation of the compliance program, from research design formulation through data collection, evaluation, assessment, design revision, and so on. These include:

1. Advisory Council on Historic Preservation
2. State Historic Preservation Officers
3. Bureau of Land Management
4. Previous researchers and other regional experts
5. Professional societies (regional AIA, historical societies, curators and archivists)

2.3.2. Guidelines and Operating Procedures. The following procedures and guidelines are recommended:

2.3.2.1. Coordination w/research design. Every effort should be made to ensure that any and all field programs are developed in accordance with the current research design, and that the results of these programs are used to the full extent to make revisions to that design.

2.3.2.2. Qualifications of field crews. Field crews should have combined experience and abilities in the following areas: historical archaeology, project area history, architectural history, cultural anthropology, architecture, photography, writing ability, field experience in the project area, experience with the full range of data collection methods identified above.

2.3.2.3. Field Forms. Several important decisions will need to be made regarding field forms, including whether to use existing state forms, to incorporate these as parts of more detailed forms, or to develop alternative ones.

2.3.2.4. Field Procedures and Photographic Documentation. Standardized field procedures must be developed, including procedures for photographic recordation. This should be performed as part of the research design development.

2.3.2.5. Data Management. A detailed data management plan should be devised before any additional field data is collected. This plan must identify: the location(s) for the database to reside, the organization of the database, and so on. These determinations are dependent, for the most part, on identifying present and future uses and users of the database and taking into consideration existing data management systems.

2.3.2.6. Data Dissemination. Programs for disseminating information to the following must be developed:

1. Planning Information for DOD Contractors. Guidelines must be developed so that DOD contractors will understand how particular resources must be treated. Locational information, identifying the type of resource involved, must also be provided.
2. Public Information Dissemination. Separate educational programs should be developed for area residents, visitors to the area, and the general public. These should be designed with the objective of decreasing vandalism and collecting, while simultaneously serving

more general educational objectives.

3. Scientific Information Dissemination. This should include the planning of symposia and publications. Other data sharing programs should also be encouraged.

2.3.3 Standard Sequencing for Historical and Architectural Studies

(to be developed)

Native American Federal Legislation

1. Indian Reorganization Act (June 18, 1934) as amended (P.L. 73-383)
   (c. 576, 48 stat 984, codified in 25 USC 461 et seq.)

2. Indian Civil Rights Act (1968)
   (P.L. 90-284, 25 USC 1301-1303)

3. Indian Self-Determination and Education Assistance Act (1975)
   (P.L. 93-638, 25 USC 450a-450n and 451-459e.)

4. American Indian Religious Freedom Act (March 21, 1978)
   (P.L. 95-341, 42 USC 1996)

5. Paiute Indian Tribe of Utah Restoration Act (1980)
   (P.L. 96-227, 25 USC 761 et seq.)

Historic Preservation: Federal Legislation

1. The Antiquities Act (1906) as amended
   (P.L. 59-209, 16 USC 431-433)

2. The Historic Sites Act (1935)
   (P.L. 74-292, 16 USC 461-467)

3. The Reservoir Salvage Act (1960) as amended
   (P.L. 86-523, 16 USC 469-469c)

4. The Historic Preservation Act (1966) as amended
   (P.L. 89-665, 16 USC 470-470m)

5. The National Environmental Policy Act (1969)
   (P.L. 91-190, 42 USC 4321-4347)

6. Protection and Enhancement of the Cultural Environment (1971)
   (E.O. 11593)

7. The Archaeological and Historical Preservation Act (1974)
   (P.L. 93-291, 16 USC 469a-469c)

8. The Land and Water Conservation Act (1976) as amended
   (P.L. 94-422, 16 USC 460 et seq.)

9. The Archaeological Resources Protection Act (1979)
   (P.L. 96-95, 16 USC 470aa-470ll)

10. The National Historic Preservation Act Amendments (1980)
    (P.L. 96-515, 16 USC 470)

Other Pertinent Federal Legislation

1. The Engle Act (1958)
   (43 USC 155 et seq.)

2. The Federal Land Policy Management Act (1976)
   (P.L. 94-579, 43 USC 1701 et seq.)

3. The Tax Reform Act (1976) as amended
   (P.L. 94-455, sec.2124)

4. The Tax Revenue Act (1978)
   (P.L. 95-600, sections 315 and 701)

Historic Preservation: Federal Regulations and Guidelines

1. 40CFR1500 Regulations on Implementing the National Environmental Policy Act Procedures

2. 43CFR1500 Siting/Land Withdrawal Requirements

3. 36CFR800 Procedures for the Protection of Historic and Cultural Properties

4. 36CFR1201(61) Criteria for Comprehensive Statewide Surveys and Plans

5. 36CFR1202(60) National Register of Historic Places

6. 36CFR1204(63) Determinations of Eligibility for Inclusion in the National Register of Historic Places

7. 36CFR1205 National Historic Landmarks

8. 36CFR1208 Historic Preservation Certifications Pursuant to the Tax Reform Act of 1976 and the Revenue Act of 1978

9. 36CFR1210(66) Recovery of Scientific, Prehistoric, Historic, and Archaeological Data: Methods, Standards, and Reporting Requirements: Proposed Guidelines

10. 36CFR1213 Procedures for the Identification and Protection of Archaeological, Historic, and Scientific Properties: Proposed Rule

11. 36CFR1214 Object of Antiquity Definition

12. 36CFR1215 Archaeological Resources Protection Act of 1979; Notice of Permitting Procedures Pending Promulgation of New Regulations

13. Administrative Memorandum No. 5: IAS Procedures for Emergency Discovery Situations (9/12/79)

14. HQ USAF Directive on Historic Preservation (1981)

15. Advisory Council: Guidelines for "Making Adverse Effect" and "No Adverse Effect" Determinations for Archaeological Resources in Accordance with 36CFR800

16. Advisory Council: Treatment of Archaeological Resources: A Handbook (1980)

17. BLM Manual 8100 - Cultural Resource Management

18. Nevada BLM Guidelines

19. Utah BLM Guidelines

20. Forest Service Guidelines

Historic Preservation: State Legislation

Nevada:

1. Preservation of Prehistoric and Historic Sites (1953) (NRS 381.95 to 381.227)

Utah:

1. Utah State Antiquities Act (1953), as amended (1977) (Utah Code 63-18-18, 19, 20, 22, 25, 26)

New Mexico:

1. Cultural Properties Act (1978) (NMSA 18-6-1 through 18-6-17)

Texas:

1. The Antiquities Code of Texas (1977) (TNRC 191.001 through 191.174)

Professional Guidelines

1. Society of Applied Anthropologists Code of Ethics

2. Standards of the Society of Professional Archaeologists (SOPA)

Project Specific Guidelines/Commitments

1. Programmatic Memorandum of Agreement (PMOA)

ATTACHMENT 4

Meeting Minutes, Agendas, Attendance Lists and Handouts for

MX DEIS Meetings

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach and Bob McMains

FROM: Ann Keegan

DATE: June 19, 1981

SUBJECT: MX DEIS Preliminary Feedback Meeting

On March 2, 1981, an MX DEIS Preliminary Feedback Meeting was held in Rooms 251-261 of the Social Services Building. State and University Consortium MX DEIS Committee Chairmen presented their committees' findings. The agenda and attendance list are attached. The discussion is summarized below.

Ken Olson began with the introduction of those present. He stated that the purpose of the meeting was to find out the review status of each chairman's specific committee, the conflicts or problems that had arisen, need for coordination and data problems. He also stated that the Utah MX Coordination Office was trying to preserve the integrity of the review process and prepare a consolidated state response to the MX DEIS. He asked for the cooperation of the media in treating the comments as preliminary and not interpreting them as final. Ann Keegan then asked that the discussions be limited to five minutes and not to exceed ten minutes.

Dennis Dalley, State Environmental Health Committee:

Hazardous wastes are deficiently treated in the MX DEIS. There are no hazardous waste disposal sites in the state of Utah. The impacts of solid waste are not adequately addressed; there are no sanitary landfills in the deployment area. It is necessary that the Air Force address the subject of obtaining permits to develop their own disposal sites or upgrade existing dumps. The air quality PDS regulations were mentioned, but how MX will affect these regulations was not. TSP modeling was done for only one hour instead of 24 hours. The MX DEIS contains a large amount of data but fails to address air quality questions. They were unable to locate a discussion of radiation control or transportation and handling of nuclear devices. Transportation accidents, accidents at sites and an assessment of the reasonable needs of state agencies were all lacking. There is also no discussion of the MX guidance and communication systems and their effect on electromagnetic issues. The MX DEIS does not handle occupational health problems. Because both square miles and square acres were used, the general sanitation requirements could not be determined. There is no state-approved system for recycling wastes. The MX DEIS does not adequately address underground waste water disposal systems, the need for health services personnel (such as sanitarians) that would be required in local health departments, or adequately consider waste water management and its impact on communities. Adequate waste facilities must be in place before the boom. There is water available in the area, but arsenic and fluoride contamination could be a problem.

Drs. Gene Woorich and Jay Messer, University Consortium Environmental Health Committee:

There is a lack of site-specific meteorological/climatic data available in the MX DEIS. The modeling uses data that are supposed to be typical, but they are not site-specific. There is no discussion of climatic effects or changes in air quality due to dust loading and changes in precipitation. The data are based on average, not worst-case, studies. The amount of disturbed acreage is questionable. There is no attempt to model long-range transport effects, calculate visibility impacts, or model zeolite effects.

The data in ETR 12: Water Resources -- should be incorporated into the MX DEIS. A tabular description and presentation of the data should replace the graphs and narrative. The MX DEIS contains encyclopedic generic statements as opposed to probablistic assessments of water resources and impacts. There is concern about the way in which data are presented in ETR 12: Water Resources, such as surface water quality being used to calculate water quality. The probability of impacts occurring on a site-by-site basis needs to be calculated.

Wilson Martin and Jim Dykeman, State Cultural Resources Committee:

The Programmatic Memorandum of Agreement, if implemented, will overcome most of the problems in the MX DEIS. The historical data should be referenced to sources. The paleontological impacts are not accurately addressed; made by people without any paleontological experience. The statements are much too general.

Archaeological data are technically accurate and generally reflect what is known about the area. The problem is in planning and follow-through on the ground; work should be site-specific. Coordination of data is inadequate.

Drs. Carol Loveland and Charles Peterson, University Consortium Cultural Resources Committee:

They are not pleased with the archaeological information presented in the MX DEIS. Site-specific information should be listed. All of the records (the BLM and Forest Service) are not used. Little information on the 1980 archaeological sampling survey (e.g., procedures, results, etc.) are covered. Further, literature is referenced but not contained in the bibliography.

The MX DEIS contains almost no data on the history of the area; only conventional sources are used. There is no examination of historical impacts. History as a cultural phenomenon is not even mentioned. There is no attempt to analyze the historical development of the region as a part of Utah and the West. Historical surveys and research design are not outlined in the Programmatic Memorandum of Agreement.

Dr. Ross Wooley, University Consortium Health and Social Services Committee:

The MX DEIS inadequately addressed health and social service issues in high growth areas. The data used are national averages instead of obtaining information from actual boom town experiences. The baseline data and boom growth rates should be documented. The disaggregated data on health-care personnel are inadequate. The nature of health problems should be examined. The data on physicians are off by a magnitude, based on what exists now and what is likely to exist in the future. The data on hospital beds are also wrong (too high). A specific plan needs to be developed as to what resources will be required and what facilities will have to

be built. The probability of attracting health-care personnel into the area under boom conditions is unlikely.

Andy Gallegos, State Health and Social Services Committee:

The MX DEIS should include projections of the local, state and federal funding needed to enable mitigation of the health and social service impacts.

Chauncey Powis, State Land Use Committee:

The data in the ETRs are not incorporated into the MX DEIS. The MX DEIS needs to be reorganized and edited to include the information in the ETRs. The alternatives discussed are primarily changes in the operating base locations; alternative deployment area configurations should be considered as well. Most of the identified land-use changes are for towns or irrigated agriculture (farming), which is incomplete/insufficient. Mitigation by avoidance and mitigation measures to be implemented by agencies other than the Air Force should be clearly specificied. There is concern that money may not be available in an austere budget climate. Units of measurement should be consistent.

Dr. Thad Box, University Consortium Land Use Committee:

The overall land-use effects and interactions are not adequately analyzed in the MX DEIS. There is an over-simplification of impacts because site-specific information is lacking. Proper land uses may not have been selected as a result. Further, because there is no weighting formula, the choice of the Preferred Alternative is political. The regulation of land use impacts at the local, state and national level is not covered. Also, the MX DEIS is lacking in the development and analysis of mitigation measures. Also, nothing about project decommissioning is mentioned.

Paul Parker, State Large-Scale Rapid Growth Committee:

There is a consistent lack of referencing and source citation in the areas of housing, public finance, quality of life, etc.. There is very little discussion of the effects on rental housing cost and availability. Further, there is little discussion of public finance and mitigation measures. Numbers should have been used instead of percentages. A number of mistakes occur because 1980 Census data are not used (e.g., Delta is listed as the largest city in Millard County). The baseline population figures are questionable; it is necessary to explain how they were developed. The construction workforce is very critical to determining population impacts, and the MX DEIS uses the low workforce estimates.

Drs. Stan Albrecht and Chris Lewis, University Consortium Large-Scale Rapid Growth Committee:

The MX DEIS did not contain much information on human quality of life. The recent literature is not incorporated or even referenced. There is no analysis of the changes in age and sex cohorts. Further, there is little attention paid to the boom town effects on public institutions. References and source citation is a serious problem; material is used but not cited as such. Inclusion of the large metropolitan areas in the region of influence is also problematic. Five and one-half pages is all that is devoted to human quality of life. No impacts on major institutions are listed, and only a little is listed on boom town impacts.

The MX DEIS is inadequate, but the ETRs are adequate to make an informed judgment about the project. The MX DEIS approach is questionable. The models do not take into account the differences in the communities. Rather, the same models are applied to unique communities and geographic areas. Income redistribution is not discussed. Income and lifestyle changes are not taken into account. The public finance section is quite weak -- too many things are assumed constant and the data are outdated. There is no discussion of school finance. Public service costs have economies of scale but constants are used. There is no specific ETR on housing. Averages are used in the analyses, even though the sensitivities or ranges are large.

Ray Sargent, State Manpower and Employment Committee:

The MX DEIS use of the earliest and lowest construction workforce estimates implies a questionable analysis of population impacts. The labor force participation rates are assumed to be constant throughout the life of the project, as is the unemployment rate. Cyclical fluctuations are not examined. The assumptions about commuting patterns seem unreasonable. Worker shortages are unevenly assessed. Also, the mitigation measures are uneven. The declining unemployment rate could actually increase. Labor surplus is not quantified. Data repetition is profuse and confusing.

Dr. Ken Davies, University Consortium Manpower and Employment Committee:

Manpower needs can be met, but significant costs will be incurred. Utah labor can benefit from MX by a reduction in unemployment rates, opportunities for the disadvantaged to enter the labor force, increases in the wage rate, etc.. The Air Force should provide the construction management or manpower plan. The MX DEIS has assumed that there are no labor unions in Utah (which is not the case) and is a major weakness. Union apprenticeships have a long lead time; training programs must be instituted now if Utah labor is to benefit from the project.

Haze Locke, State Public Safety Committee:

The MX DEIS is inadequate. It only examined the number of police officers needed for every thousand persons in the area. The MX DEIS paid no attention to training, retention, jails, need for cooperative law enforcement, ambulances, paramedics, courts and support personnel.

L. D. Bingham, University Consortium Public Safety Committee:

Public safety will be a significant problem, but the MX DEIS addressed very little in terms of needs. There will be difficulties in attracting and retaining law enforcement personnel. The state programs and regulations are not dealt with, nor is highway safety. Criminal justice is not addressed at all. Precautions should be taken to keep crime rates down. Fire protection is not addressed either. A stage-by-stage analysis needs to be done. The cost analysis is inadequate.

Bruce Parry, State Native Americans Committee:

The main problem with the Facilitator's, Inc. report is research design. It was presumed that the Bureau of Indian Affairs (BIA) and others could be used as secondary data sources. The report was supposed to contain information from on-site studies, but it was not gathered. Further, the BIA does not have the data. Most of the information in the report is 13 years old. Secondary data are not available or are inadequate. Indian histories are included, but are incomplete and inaccurate.

Impacts and mitigation measures are not specified.

Betty Garcia, Local Native Americans Committee:

The Paiute Indian Tribe of Utah is concerned about the lack of involvement and the inaccurate representation of their concerns in the MX DEIS.

Rudy Drobnik, State Wildlife Resources Committee:

The MX DEIS and applicable ETRs are disjunct and not properly summarized. The deployment region was analyzed as a whole and not by state. The maps are too small in scale to determine impacts and the adequacy of mitigation measures. The narrative should be condensed into a continuous section. The alternatives do not consider combinations of various valleys or even portions of valleys. There is no allowance for direct state participation on the Tier II siting team. There is no leeway for the selection of the least environmentally sensitive areas. Definitions of terms should be placed in the beginning of the MX DEIS. The terminology is repetitious and confusing. The definition of the significance of wildlife impacts is wrong. There is no discussion of cumulative impacts, impacts by valleys, or the construction sequence. The locations of the aggregate borrow pits are not indicated. The private land-status maps are incorrect. There is no discussion of the wildlife water holes in the area. The analysis of fishing and hunting impacts is inadequate. The restrictions during construction and for aerial reconnaissance should be specified. There is an inadequate description of enforcement activities and authorities. Laws in Utah and Nevada vary, causing a lot of confusion.

Dr. Neil West, University Consortium Ecosystem Committee:

The synergistic and antagonistic interactions within the ecosystem were ignored in the MX DEIS. There is no discussion of the increase in fire hazards due to vegetative changes. Revegetation as a mitigation measure is treated equivocally. The Site Ranking Method is a questionable model since there is no validation of it; in fact, it is not at all clear that it was even used to select deployment area valleys. The estimates of carrying capacity are suspect. A major shortcoming is the way that wildlife and plant life are analyzed in one category.

Ken Creer, State Ariculture Committee:

The MX DEIS does not cover agriculture as an industry. Agriculture will be driven out of business in the desert. Grazing of sheep and cattle is not addressed. The analysis must be site-specific and involve the ranchers. Mitigation is not feasible because both winter and summer forage areas are needed. Aerial reconnaissance restrictions must be specified; predator control and surveillance is done aerially. Dust from construction must also be evaluated.

Dr. Bruce Godfrey, University Consortium Agriculture Committee:

A national perspective is taken instead of a regional one. The MX DEIS rejected the Resource Concept's AUM impact report, but it accepted the BLM AUM methodology because the former assessment of impacts is "too large." It is critical that season and type of use be evaluated by habitat. Also, it is necessary to obtain ranch data to analyze the indirect impacts on agriculture. Further, the recent literature is ignored. Labor for construction will probably come from the agricultural industry, too.

Dee Hansen, State Water Resources Committee:

The MX DEIS does not cover impacts adequately. To date, there has been no attempt to pump production wells. Until this is done, site-specific hydrologic impacts cannot be determined. The analysis contains a number of technical errors and misstatements. If applications are approved and interference occurs, Utah law provides for compensation of those affected. It appears that the Air Force has asked for more water than is necessary; the state engineer will approve only what is necessary. The impacts on closed hyrologic basins need to be assessed. Until site-specific information is provided, there will be no approval of the water applications.

Jay Bagley, University Consortium Water Resources Committee:

The MX water demands will necessitate surface diversions. Until the locations of the diversion points or wells are known, as well-pumping rates and durations and interrelationships among wells, the assessment of impacts cannot be made. The MX DEIS is enclycopedic instead of analytic. There is a partial analysis of water filings and rights, but no comment on them. There is a listing but no analysis of future industrial and minerals water needs. The physical hydrology of the basins is misunderstood. The focus is primarily on groundwater; there is no discussion of purchasing surface water rights to meet MX demands. Erosion will be a problem, but surface drainage alterations are ignored. Revegetation is questionably discussed; it should be more thoroughly examined. The computer modeling that is used is not state-of-the-art and serves no useful purpose in the MX DEIS.

Ken Travous, State Recreation Committee:

The baseline was not adequately established. The current literature was ignored. Dispersed recreation is not adequately addressed. There is no mention of the Department of the Interior's Off-Road Vehicle Plan (1980) or the U.S. Department of Agriculture's Assessment of Forest and Rangelands. An interdisciplinary approach is required by the National Environmental Policy Act of 1969. Local recreation needs are not analyzed. The scientific judgment used is questionable.

Jerry Jacob, University Consortium Recreation Committee:

The MX DEIS failed to gather and analyze any significant quantitative recreation data. It did not incorporate existing relevant studies. The recreation demand estimates to not attempt to quantify recreation opportunities; this implies that the demand for dispersed recreation activities has been missed. Community recreation facilities are not addressed. The analysis of the supply of recreation facilities did not distinguish between the quality of facilities, nor was their accessibility or demand by age-sex cohort. Average usage is assessed, but not peak loadings. The MX DEIS shows a lack of understanding ofthe wilderness concept. Enforcement and its costs are not examined. There is no discussion of recreation conflicts or information on the impacts of MX on the Utah tourist industry.

Don McMillan, State Geology and Minerals Committee:

ETR 11: Geology and Mining -- is a general review that has glaring technical errors and is poorly edited. The Fugro Minerals Report is an extensive, comprehensive analysis. It should be incorporated into the MX DEIS.

Dr. M. K. McCarter, University Consortium Geology and Minerals Committee:

(See attached written comments)

Dr. Vaughn Hall, State Education Committee:

The MX DEIS does not contain much information on education. The baseline statistics are wrong. Post-secondary education and manpower training are not examined. Although the Utah Uniform School Fund is mentioned, the variation among school districts is not. Neither are the differences between the states.

Gene Surznegger, State Transportation Committee:

Any impacts on transportation facilities must be taken care of by the Air Force. The MX DEIS must enumerate MX-related transportation needs. Aerial restrictions should be explicitly discussed.

Dr. Larry Anderson, University Consortium Energy and Non-renewable Resources Committee:

The availability of fuel oils is not adequately assessed in the MX DEIS. The provision of electricity, specifically the transmission system, needs to be looked at more extensively. The current literature is not adequately examined. Alternate energy sources should be addressed. The technical documentation is not sufficient.

State + University Review Mtg.
March 2, 1981

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Utah MX DEIS Committee Chairmen Meeting

Room 251-261, 150 West North Temple, Salt Lake City, 1:00-5:00 p.m.

March 2, 1981

A G E N D A

1. Introduction and Purpose of Meeting - Ann Keegan

2. Brief Summarization of Committee Findings, emphasizing Conflicts and Issues-limited to five minutes, State Chairmen followed by University Chairmen

   A. Environmental Health
   B. Cultural Resources
   C. Public Safety
   D. Native Americans
   E. Wildlife Resources
   F. Agriculture
   G. Water Resources
   H. Recreation
   I. Land Use
   J. Geology and Minerals
   K. Education
   L. Transportation
   M. Legal
   N. Health and Social Services
   O. Rapid, Large-Scale Growth
   P. Energy and Nonrenewable Resources
   Q. Manpower and Employment
   R. Planners

3. Discussion of Interface with other Utah/Nevada Committees or the Air Force

ALL State Chairmen must attend this meeting; if you cannot do so, please designate an alternate

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

MEMORANDUM

TO: All Interested Persons

FROM: Utah MX Coordination Office

DATE: May 19, 1981

SUBJECT: MX Technical Interchange Meetings on Tiering and Secondary Impacts

On March 26, 1981, two MX Bi-State Technical Interchange Meetings on Tiering and Secondary Impacts were held in Room 307 of the State Capitol in Salt Lake City. The agendas, attendance lists and handouts are attached. The discussion is summarized below.

Tiering Technical Interchange Meeting

The tiering schedule is as follows: 1) Tier I final environmental impact statement (FEIS) 7/81; 2) Tier IIA environmental assessment (EA) 7/81 (selection of a main operating base - operational base test site - designated assembly area suitability zone, initial operational valley(s) shelter sites and designated transportation network and utility rights-of-way, construction camps, aggregate batch plants, haul roads); 3) Tier IIB EA 8/82 (selection of secondary operating base suitability zone, construction camps, shelters, designated transportation network); 4) Tier IIC EA 8/83 (shelters, designated transportation networks, construction camps); 5) Tier IID EA 8/84 (shelters); 6) Tier IIE EA 7/85 (shelters); and Tier III A through F, site-specific EAs.

Tier I deals only with the selection of a deployment area(s) (full basing in Utah/Nevada/Texas/New Mexico). Tier II A through E will deal with the selection of suitability zones within the deployment area(s). Tier III A through F will deal with the selection of specific sites.

Given the Tier I FEIS and Tier IIA EA timetable, the review of the Tier IIA environmental assessment will be very compressed (about 30 days). Nevertheless, the Air Force pointed out that they will be submitting a land withdrawal application to the BLM that will have to be processed and reviewed before the application is submitted to Congress. Public hearings on the land withdrawal application are tentatively scheduled for September-November of 1981, with the application and mandatory BLM report being submitted to Congress and the Secretary of the Interior about February-March of 1982. It is expected that Congress will act (i.e., give the land to the Air Force) by May of 1982. The Air Force indicated that there will be no construction of any kind before

Congressional action/approval of the land transfer.

The Air Force feels that tiering and deployment of the MX are compatible. The phased decision process, from large geographic area to specific sites, is the only way to accomplish the initial and final operating capability dates (1986 and 1989, respectively). The Air Force mentioned several alternative courses that the tiering decision process could follow; for example: 1) the Administration could retain the decision prerogative at the executive level, 2) Congress could retain the decision prerogative at the legislative level, or 3) the Administration could delegate the decision making responsibilities to the Secretary of Defense for the initial high-level decisions, with the lesser decisions delegated to others by the Secretary of Defense.

The State of Utah mentioned their concerns about the lack of a mechanism to gather Utah input as an integral part of the tiering process. The multiple track narrowing process as outlined above could potentially lead to inconsistent, incomplete or disjunct data or response to the tiered environmental impact statement/environmental assessments and/or the weapon system site layouts. This process already poses a heavy burden on the state's land and resource management agencies. It was suggested that such a piecemeal approach was unworkable for Utah and the Air Force; the Air Force should develop and implement as soon as possible an integrated, consistent process for soliciting and incorporating input from all appropriate federal, state, local, and private interests.

It was pointed out that there is not much primary data available for the narrow geographic areas under consideration to write the Tier IIA EA. Therefore, the risk of replicating support facilities at the construction camps, operating bases and local communities is high. The Air Force indicated they must wait for a deployment decision; the base comprehensive plan (BCP) will be incorporated into Tier IIA. The Air Force will attempt to minimize the provision of redundant facilities. Further, the construction sequence and its management is dependent on the Tier IIA decision(s) that are made.

Problems associated with construction labor peaks were discussed. Labor peaking is dependent on the length of the work week and the number of worker shifts, which in turn will affect the length (duration) of construction activities and the level of support services required. The following policy issues that the Air Force must address are: 1) dependent restrictions and/or incentives, 2) land use, 3) construction camp housing, and 4) recreational facilities provided by the contractor-government. The state indicated that the Tier IIA EA should provide recommendations on support services levels that state and local officials could review. The Air Force said that the support service levels would be given to state and local officials for their reaction in June of 1981 (before the Tier IIA EA). The Air Force will decide the service levels to be provided at the construction camps, and will transmit this decision to Congress.

Air Force was asked about the weapons system siting team, and they said it was composed of the Air Force, the Bureau of Land Management, the Corps of Engineers, and contractor personnel. The State of Utah said that they wanted to actively participate in the siting process, since it is better to interact rather than to react. Utah is currently involved in contingency planning and has already reacted to one iteration of the initial operating valleys site layouts (Pine and Wah Wah Valleys, Utah). The state wants to be a party to all siting decisions.

Secondary Impacts Technical Interchange Meeting

The purpose of the technical interchange meeting was stated: they are intended to facilitate the exchange of information. The Air Force will be gaining an understnading of the Utah/Nevada concerns before the end of the Tier I DEIS comment period, and will therefore be able to begin work on the final Tier I environmental impact statement. The meeting will also give the Air Force an opportunity to provide the states with feedback on the environmental impact process and supporting rationale.

The Air Force and Henningson, Durham and Richardson (HDR, the consultants who prepared the Tier I DEIS) delineated the following secondary effects for discussion: 1) quality of life, 2) native Americans, 3) fauna, 4) water, 5) ranching, 6) housing, 7) construction resources, 8) education, and 9) fiscal impacts.

The first area of discussion was the Tier I socioeconomic analysis. HDR had to devise an integrated system to look at impacts for certain critical variables, that was capable of evaluating them using a comparable methodology and the best available data. As a result, HDR could comprehensively analyze various scenarios.

HDR used the following models to analyze socioeconomic impacts: 1) a Regional Industrial Multiplier System (RIMS) model (a modified national industrial model), 2) the Utah Process Economic and Demographic Impact Model (UPED) and the Demographic and Economic Impact Simulation model (DEISM) (labor market simulation models, and respectively the official Utah and Nevada population models), 3) a Social Impact Assessment (SIA) model, and 4) a Public Finance model. RIMS was used to analyze labor demand, i.e., to describe the MX project by estimating the direct, indirect and multiplier labor market effects. UPED/DEISM were used to analyze labor supply by estimating the baseline labor supply and the project-induced change in labor to derive excess demand, labor force participation rates and migration.

HDR indicated that employment multipliers used in RIMS are high (overestimates) because of the 1972 data. There was no exogenous adjustment to reflect higher wages. The location quotient was derived using 1976 data.

The Public Finance model was used to provide information on counties and school districts, but not for the states. The inputs were based on U. S. Census of Government data. The impacts are shown by county of residence.

The discussion then shifted to other secondary impact categories. It was agreed that there was no quantitative analysis of the expected changes in local quality of life; Utah said that such an analysis should have been included to predict changes in sociopathogenic indicators. Overall, "old" data seems to have been used in the Tier I DEIS; the Tier I FEIS should incorporate more recent data. With regard to housing, Changes in dwelling types and vacancy rates should be analyzed and discussed in the Tier I FEIS.

Using education as an example, HDR indicated that the three paramenters considered in the Tier I DEIS were examined to identify only the order of magnitude changes/impacts that were to be expected with the project. The analysis and discussion of these variables was never intended to be a planning study.

The final environmental impact statement will incorporate the Facilitator's study on native Americans.

The analysis of recreation and wilderness used anonymously derived attractiveness ratings for hunting and wilderness experiences. These ratings were combined into a Gaussian decay equation using people and distance to the resources. Attractiveness measurements were unique for each resource.

Then a rather long discussion ensued on the feasibility of revegetation and concommitant water requirements. HDR indicated that the Tier I DEIS contained full and partial revegetation water requirements: 1) low (no revegetation water estimates:, 2) high (full revegetation water estimates), 3) and most probable quantity (revegetation water estimates for shelters only). HDR indicated that the revegetation water estimates were based on a requirement of one acre-foot of water per acre for one year, which is the revegetation water requirement for crested wheatgrass. Further, HDR indicated that crested wheatgrass was not the only species under consideration for revegetation. The State of Nevada raised several concerns about the feasibility of revegetation given the water estimates, such as: 1) some deployment area valleys under consideration have as little as three inches of annual precipitation; 2) most precipitation is snow melt; 3) ineffective and/or partial revegetation programs will result in soil erosion, fugitive dust, and infestation by noxious exotics; 4) the areas to be disturbed are critical livestock and wildlife grazing areas; and 5) species must be calculated.

HDR said that magnesium chloride bitterns are no longer under consideration for use as a dust palliative. The Resource Concepts range/ranching study will be incorporated into Tier I FEIS. The analysis of wildlife, ranching and vegetation impacts will be at the hydrologic subunit level only.

ATTENDANCE — TRIBAL MEETING 3-26-81

Kenneth Olson	Utah MX Coordination Office	
Vostecky	Dept Public Safety	
Stephen Berwick	HDR-Sciences	
[illegible]	Utah MX Coordination Office	(801) 364-9647
Jill Moore	Tribal Corp	(801) 626-1216
Phyllis Moore	Interested citizen	(801) 782-7017
Jack DeMann	Hercules, Inc.	
Paul Parker	State Planning Coord. Office	533-6491
Sue Sturgeggen	Utah Dept. of Transp.	533-6514
Rudy Drobnick	Utah Wildlife Resources	533-9333
Darrell H. Nish	" "	"
Rowan C Stutz	Utah State Office of Education	533-5431
Jerry Olds	Utah Div. of Water Rights	533-6071
Maj Bob McMains	MX Liaison Office - Utah	364-9647
Reed E. Hansen	The Urban Institute	206/842-7223
Arthur Kingdon	KWMS	972-6397

TIERING MEETING

9:00 a.m. - 307 State Capitol, Salt Lake City

March 26, 1981

A G E N D A

I. Tiered Decision Making

A. General Discussion of Rationale

B. As Implemented

1. Tier I
2. Tier II
3. Subsequent Tiers

C. Effects on Decision Making

1. Presidential
2. Congressional
3. BLM
4. Others: States, Native Americans, Forest Service, National Park Service, etc.

D. Most Current Timetable for Tiers I, II and Subsequent

II. Site Specific Impacts and Mitigations

A. Relationship Between the Tiers and the Quantification of Site-Specific Impacts

1. Tier I
2. Tier II
3. Subsequent Tiers

B. Relationship Between the Tiers and the Implementation of Impact Mitigation Strategies/Policies

1. Tier I
2. Tier II
3. Subsequent Tiers

SUGGESTED MEETING LENGTH: 2 hours

Call 364-9647 to confirm attendance

M-X TIERED DECISION MAKING

TIERING

- "THE PURPOSE OF TIERING IS TO SIMPLIFY THE EIS PROCESS BY PROVIDING THAT ENVIRONMENTAL ANALYSIS COMPLETED AT A BROAD PROGRAM LEVEL NOT BE DUPLICATED FOR SITE-SPECIFIC PROJECTS REVIEWS"

  CEQ, NOVEMBER 29, 1978

- "AGENCIES ARE ENCOURAGED TO TIER THEIR ENVIRONMENTAL IMPACT STATEMENTS TO ... FOCUS ON THE ACTUAL ISSUES RIPE FOR DECISION AT EACH LEVEL OF ENVIRONMENTAL REVIEW"

  40 CFR 1502.20

- TIERING IS APPROPRIATE WHEN THE SEQUENCE OF STATEMENTS OR ANALYSES IS ... (FROM A BROAD STATEMENT TO AN) ... ANALYSIS OF LESSER SCOPE OR TO A SITE-SPECIFIC STATEMENT OR ANALYSIS

  40 CFR 1508.28

TIERING OVERVIEW

- TIERING ALLOWS EFFECTIVE CONSIDERATION OF ENVIRONMENTAL CONCERNS IN SITING
- SUCCESSIVE LEVELS OF REFINEMENT OF ENVIRONMENTAL DOCUMENTATION PROCEEDS IN CONCERT WITH INCREASING SITE SPECIFICITY
- TIER 1 (DAS/LW EIS) ALLOWS SUITABILITY ZONE SELECTION FOR OB AND ODA FACILITIES
- TIER 2 PROVIDES ASSESSMENTS FOR SITE-SPECIFIC SELECTION DECISIONS AND ALLOWS LAND WITHDRAWAL
- TIER 3 PROVIDES ASSESSMENTS FOR THE SPECIFIC SELECTED SITES AND ALLOWS CONSTRUCTION

TIER 1

- DEPLOYMENT AREA SELECTION
- LAND WITHDRAWAL/ACQUISITION
- OB SUITABILITY ZONES
- CUMULATIVE EFFECTS OF ALTERNATIVES
- DOCUMENTATION IS FEIS

TIER 2

- FACILITY ZONES AND CORRIDORS
- DOPAA DETAIL RESOLUTION
- COMPARISON TO TIER 1 CUMULATIVE EFFECTS
- COMPARABLE (NOT IDENTICAL) TO TIER 1 EFFECTS
- LESSER CUMULATIVE EFFECTS AS SENSITIVE AREAS AVOIDED
- DOCUMENTATION IS EA AND FONSNI

TIER 3

- FACILITY SITES AND ROAD ALIGNMENTS
- SPECIFIC LOCATIONS ANALYZED
- COMPARISON TO TIER 2 EFFECTS
- COMPARABLE (NOT IDENTICAL) TO TIER 2 EFFECTS
- LESSER CUMULATIVE EFFECTS AS SENSITIVE AREAS AVOIDED
- DOCUMENTATION IS EA AND FONSNI

DEC 20 1978

PHASING

TIERS 2 AND 3 ARE PHASED TO THE MCP BUDGET.
ALSO KNOWN AS TIER 2A, 2B, ..., 2E; TIER 3A, 3B, ..., 3E.

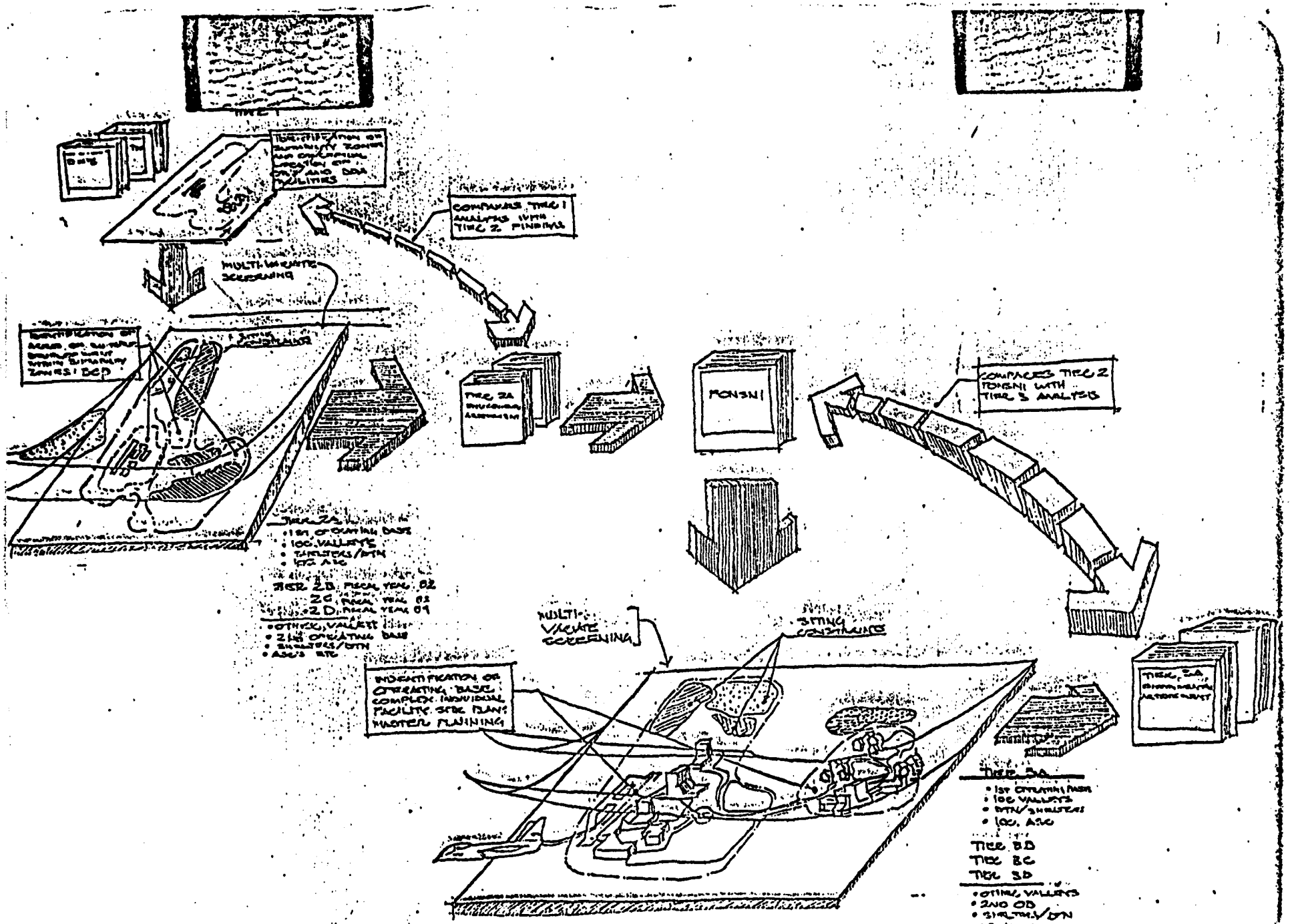
PHASE A - 4 OBs, OBTS, DAA, DTN, IOC, VALLEYS, CAMPS

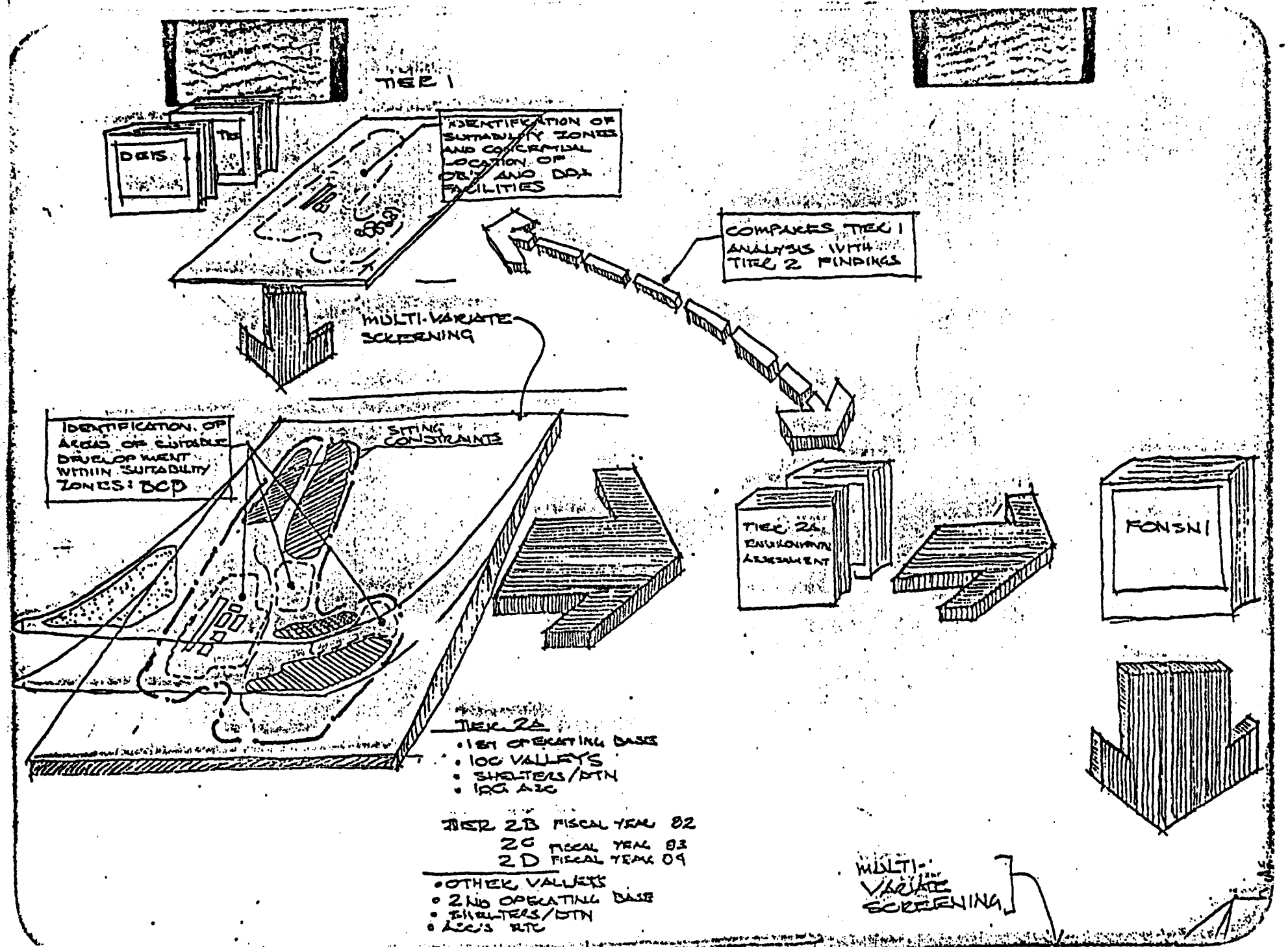
PHASE B - 2nd OB, CAMPS, SHELTERS, DTN

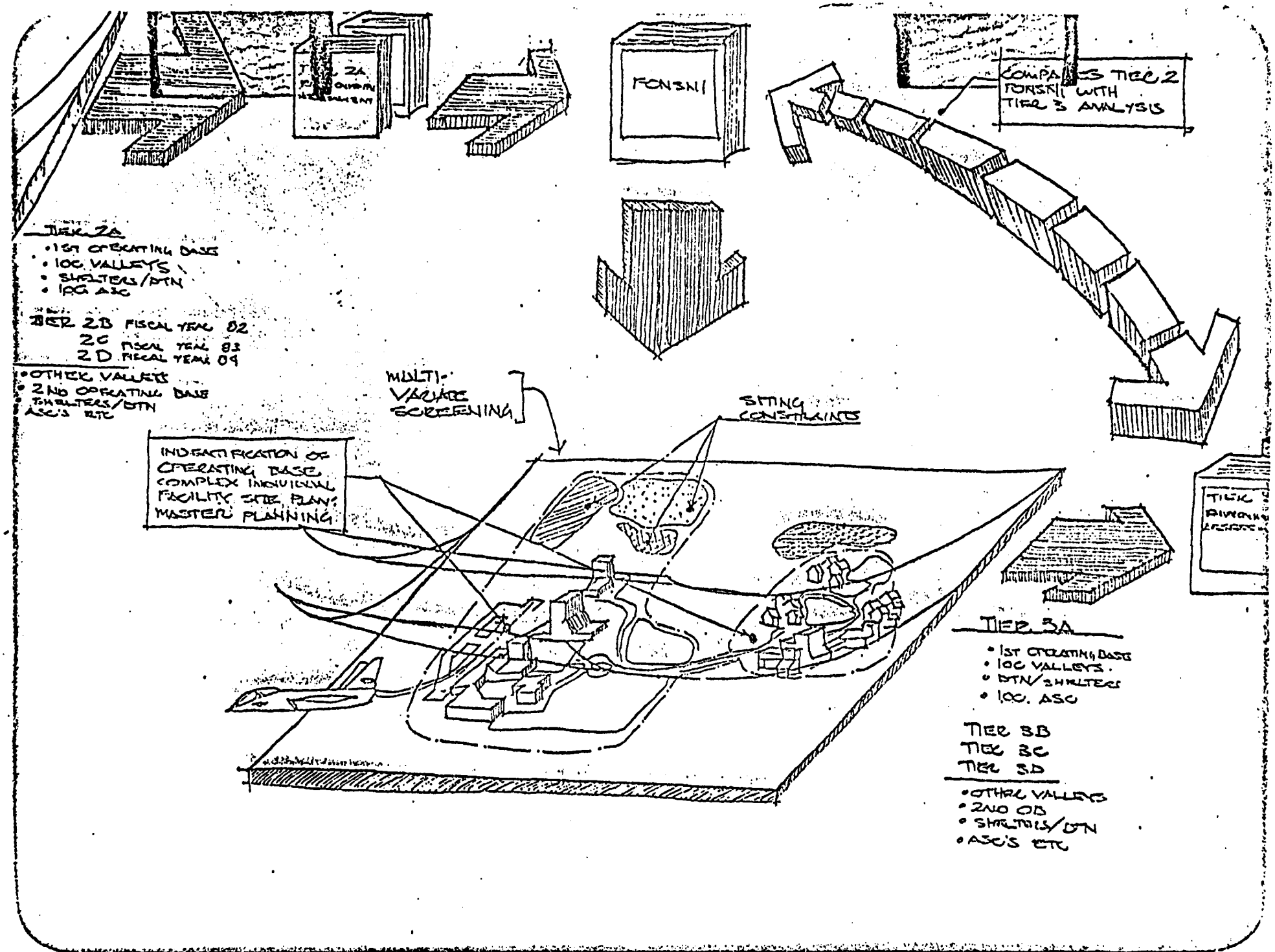
PHASE C - SHELTERS, DTN, CAMPS

PHASE D - SHELTERS

PHASE E - SHELTERS


TIER 1
IDENTIFICATION OF
COMPARES TIER 1
ANALYSIS WITH
TIER 2 FINDINGS
MULTI-VARIATE
SCREENING
TIER 2A
COMPARES TIER 2
FINDINGS WITH
TIER 3 ANALYSIS
TIER 2B FISCAL YEAR 02
TIER 2C FISCAL YEAR 03
TIER 2D FISCAL YEAR 04
MULTI-
VARIATE
SCREENING
3 TIMING
CONSTRAINTS
IDENTIFICATION OF
OPERATING BASE,
COMPLEX, INDIVIDUAL
FACILITY, SITE PLANS,
MASTER PLANNING
TIER 3A
TIER 3B
TIER 3C
TIER 3D


TIER I
DBIS
IDENTIFICATION OF SUITABILITY ZONES AND CONCEPTUAL LOCATION OF OB'S AND DDA FACILITIES
COMPARES TIER I ANALYSIS WITH TIER 2 FINDINGS
MULTI-VARIATE SCREENING
IDENTIFICATION OF AREAS OF SUITABLE DEVELOPMENT WITHIN SUITABILITY ZONES: DCP
SITING CONSTRAINTS
TIER 2A ENVIRONMENTAL ASSESSMENT
FONSNI
TIER 2A
• 1ST OPERATING BASE
• 100 VALLEYS
• SHELTERS/DTN
• 100 A/C
TIER 2B FISCAL YEAR 02
2C FISCAL YEAR 03
2D FISCAL YEAR 04
• OTHER VALLEYS
• 2ND OPERATING BASE
• SHELTERS/DTN
• A/C'S ETC
MULTI-VARIATE SCREENING


FONSNI
COMPARES TIER 2 FONSNI WITH TIER 3 ANALYSIS
TIER 2A
• 1ST OPERATING BASE
• 100 VALLEYS
• SHELTERS/DTN
• 100 ASC
TIER 2B FISCAL YEAR 02
2C FISCAL YEAR 03
2D FISCAL YEAR 04
• OTHER VALLEYS
• 2ND OPERATING BASE
SHELTERS/DTN
ASC'S ETC
MULTI-VARIATE SCREENING
SITING CONSTRAINTS
IDENTIFICATION OF OPERATING BASE COMPLEX INDIVIDUAL FACILITY SITE PLAN: MASTER PLANNING
TIER 3A
• 1ST OPERATING BASE
• 100 VALLEYS
• DTN/2 SHELTERS
• 100 ASC
TIER 3B
TIER 3C
TIER 3D
• OTHER VALLEYS
• 2ND OB
• SHELTERS/DTN
• ASC'S ETC

TIERING SCHEDULE

TIER 1	EIS	JULY 1981
TIER 2A	4 OBs, OBTS, DAA, DTN, IOC VALLEYS, CAMPS	JULY 1981
TIER 2B	2nd OB, CAMPS, SHELTERS, DTN	AUGUST 1982
TIER 2C	SHELTERS, DTN, CAMPS	AUGUST 1983
TIER 2D	SHELTERS	AUGUST 1984
TIER 2E	SHELTERS	JULY 1985
TIER 3A-F	EAs	

TIERING AND M-X

- TIERING IS WELL SUITED TO A PHASED DECISIONMAKING PROCESS LIKE THE M-X DEPLOYMENT AREA SELECTION AND LAND WITHDRAWAL/ACQUISITION PROGRAM

- A 3-TIER APPROACH PHASED TO THE MCP SCHEDULE HAS BEEN PROPOSED. RESOLUTION OF ANALYSIS AT EACH TIER REFLECTS RESOLUTION OF THE DOPAA

- TIER 1 - SYSTEM *CUMULATIVE EFFECTS*
- TIER 2 - FACILITY SUITABILITY ZONE EFFECTS
- TIER 3 - SITE SPECIFIC EFFECTS

- AT EACH TIER A COMPARISON TO THE SUPERIOR TIERS IS NECESSARY TO SUPPORT A FONSNI (i.e., THAT THE MORE SPECIFIC IMPACTS ARE COMPARABLE TO OR LESS THAN THE GENERAL IMPACTS)

ATTENDANCE

TECHNICAL INTERCHANGE MEETING - SECONDARY IMPACTS

NAME	AGENCY	TELEPHONE
LTC WM. A. VERYEST	AFRCE-MX	714/382-4891
Reed E. Hansen	The Urban Institute	206/842-7228
VOJTECKY	Dept Public Safety	801-533-4543
Jno Nelson	AG Office	801-533-5261
[illegible]	[illegible]	[illegible]
Brad Barber	Utah State Planning Coord. Office	801-533-4972
RUDY DROBNICK	UTAH WILDLIFE RESOURCES	801-533-9333
Darrell H. Nish	"	"
Jean Binyon	Social Services	801-533-6114
Arthur Kingdom	KWMS	972-6397
PAMELA WILCOX	Nv Dept of Conserv + Nat'l Res	702-885-5314
Kim Cooley	NV Mx Coord Office	702-885-5960
Elwood Mose	Nv. Indian Commission	702 784-6243
Donald Barr	Greater Nevada Health Sys Ag	(702) 323-1791
Stephen Bellerek	HDR - Sciences	(805) 965-5214
David H. Comacho	HDR - Sciences	805-965-5214
Bob Pierhus	HDR - Sciences	805-965-5214

SECONDARY IMPACTS MEETING

11:00 a.m. - 307 State Capitol, Salt Lake City

March 26, 1981

A G E N D A

I. Community Secondary Impacts

A. Impact Identification Temporally by Region

1. Methodology and Rationale
2. Validation, Sensitivity Analysis and Monitoring
3. Detail by Tier

B. Impact Mitigation Strategies and Implementation

1. Assessment of Feasibility

a. Technical
b. Financial (includes impact aid)

2. Detail by Tier

II. Environmental Secondary Impacts

A. Impact Identification Temporally by Region

1. Methodology and Rationale
2. Validation, Sensitivity Analysis and Monitoring
3. Detail by Tier

B. Impact Mitigation Strategies and Implementation

1. Assessment of Feasibility

a. Technical
b. Financial (includes impact aid)

2. Detail by Tier

III. Regional Secondary Impacts

A. Impact Identification Temporally by Region

1. Methodology and Rationale
2. Validation, Sensitivity Analysis and Monitoring
3. Detail by Tier

B. Impact Mitigation Strategies and Implementation

1. Assessment of Feasibility

   a. Technical
   b. Financial (includes impact aid)

2. Detail by Tier

SUGGESTED MEETING LENGTH: 3 hours (excluding lunch break)

Call 364-9647 to confirm attendance

M-X SOCIOECONOMIC ANALYSIS REQUIREMENTS

- ANALYZE ALL ALTERNATIVES USING A COMPARABLE METHODOLOGY.
- INCORPORATE BEST AVAILABLE BASELINE PROJECTIONS.
- RESPOND TO NEEDED CHANGES IN M-X PROJECT DESCRIPTION.
- PREDICT ALL KEY SOCIOECONOMIC VARIABLES SINCE MOST WOULD BE SIGNIFICANTLY AFFECTED BY M-X.

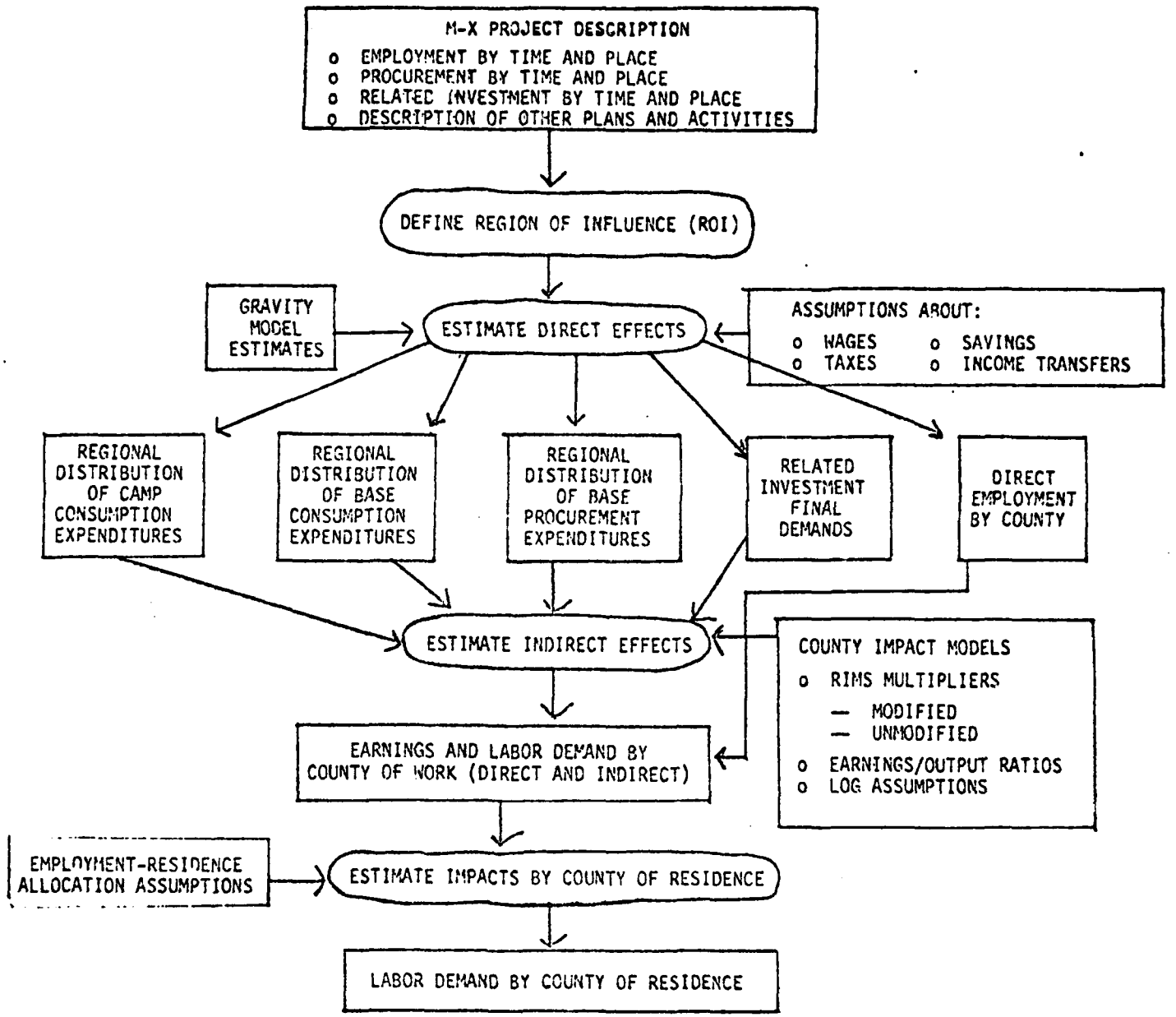
*TOOLS FOR REGIONAL SOCIOECONOMIC ANALYSIS

- REGIONAL INTERINDUSTRY MODELS
  - REGIONAL INDUSTRIAL MULTIPLIER SYSTEM (RIMS)
  - AVAILABLE REGIONAL INPUT-OUTPUT MODELS
- SOCIAL IMPACT ASSESSMENT MODEL
- PUBLIC FINANCE MODELS
- STATE ECONOMETRIC MODELS

*BECAUSE OF THE MAGNITUDE OF THE M-X PROJECT, ALL THESE SYSTEMS HAVE BEEN USED IN ANALYZING THE IMPACTS OF M-X DEPLOYMENT.

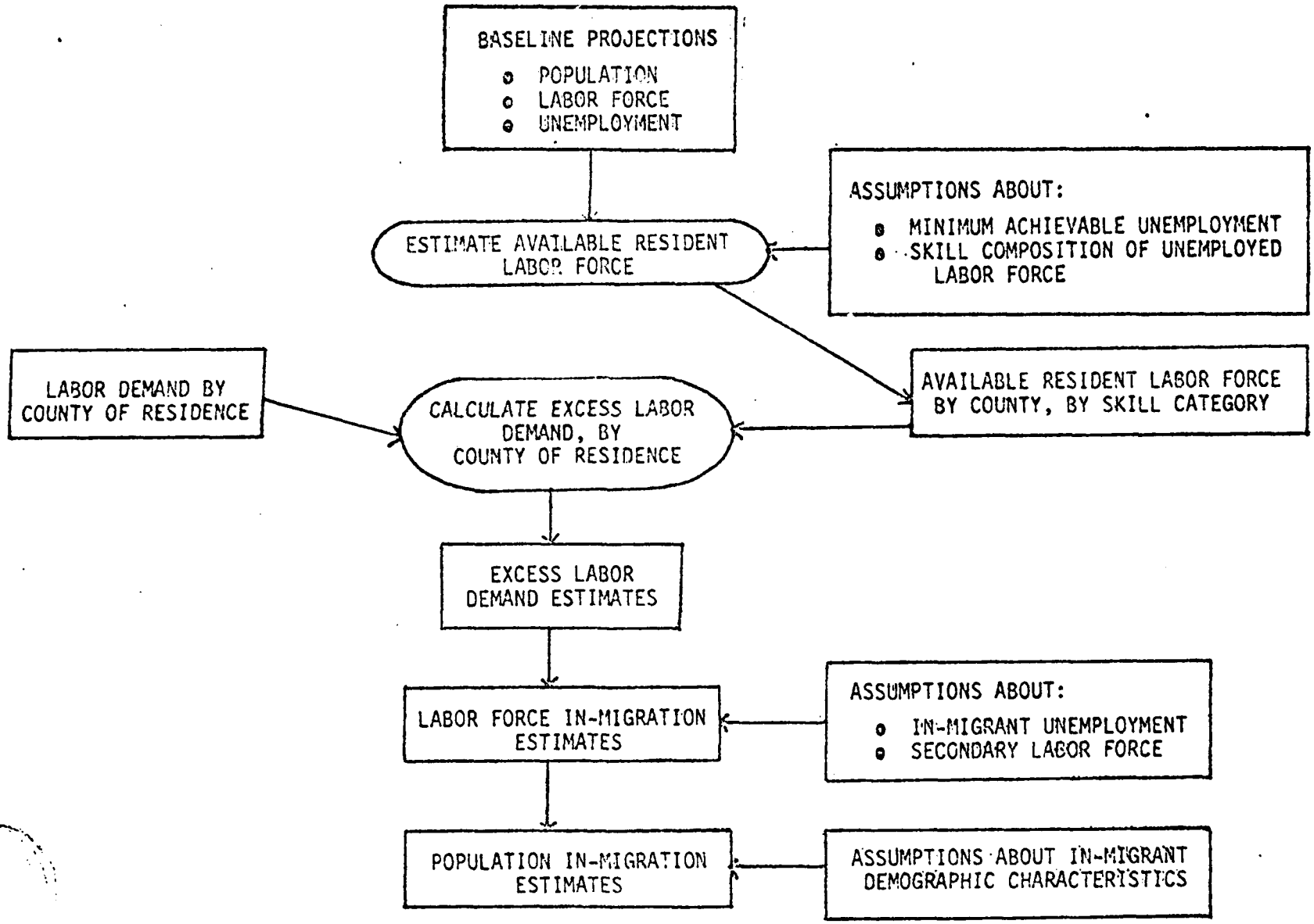
M-X SOCIOECONOMIC IMPACT MODELING SYSTEM:

LABOR DEMAND ANALYSIS



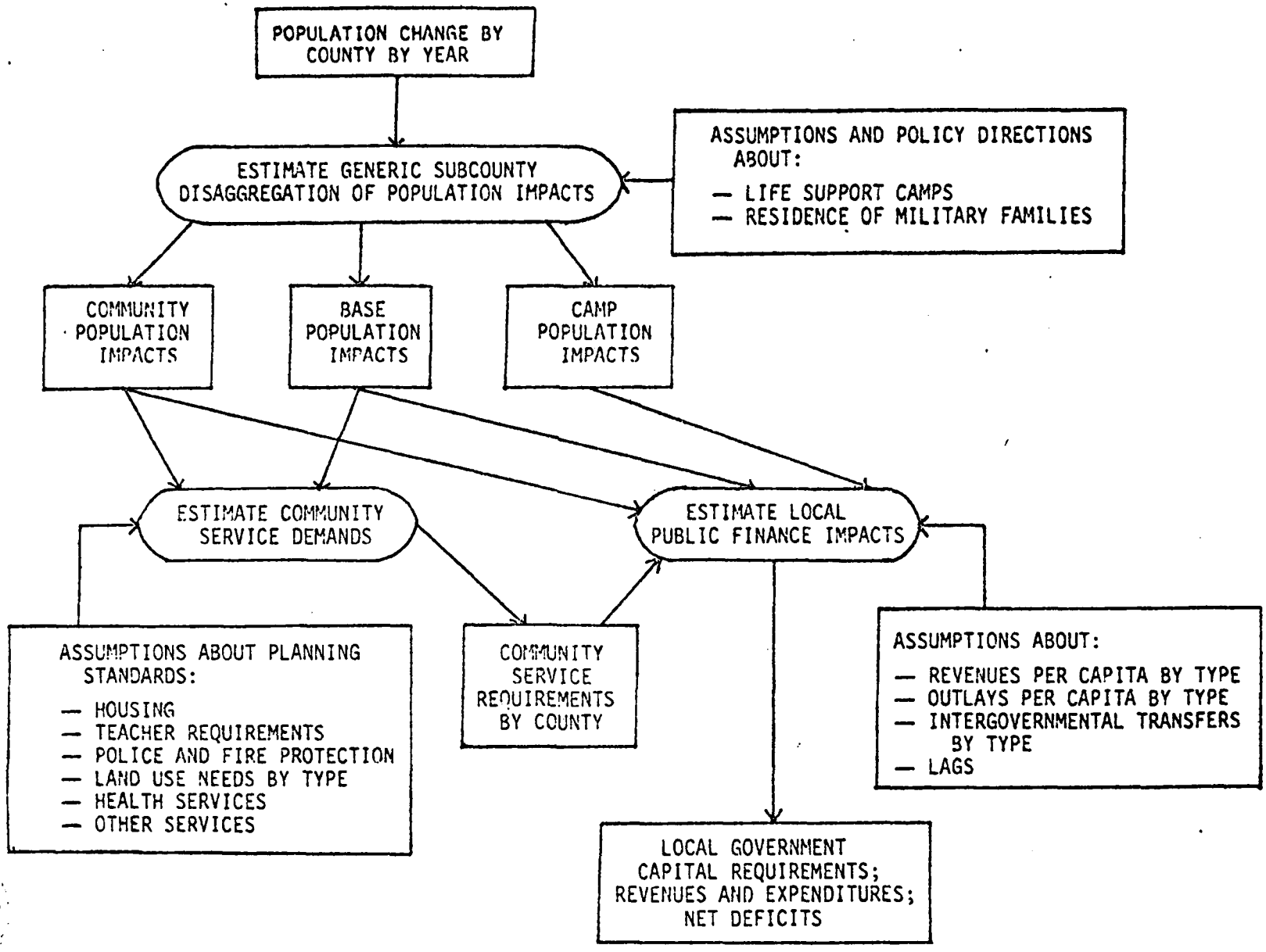
M-X SOCIOECONOMIC IMPACT MODELING SYSTEM:

LABOR SUPPLY ANALYSIS



M-X SOCIOECONOMIC IMPACT MODELING SYSTEM:

POPULATION, PLANNING, AND PUBLIC FINANCE ANALYSIS



REG... STATE YEAR: 1986 PERCENT MILITARY ONBASE: 80.0
OPERATING BASE IN THIS REGION
MODIFIED R.I.M.S. MULTIPLIERS USED
BASE IN THIS REGION
PROPOSED ACTION: FULL DEPLOYMENT - NEVADA/UTAH
  BASE I AT COYOTE SPRINGS, NV (CLARK CO.)
  BASE II AT MILFORD, UT (BEAVER CO.)

IMPACTS BY COUNTY OF RESIDENCE

POPULATION IMPACTS

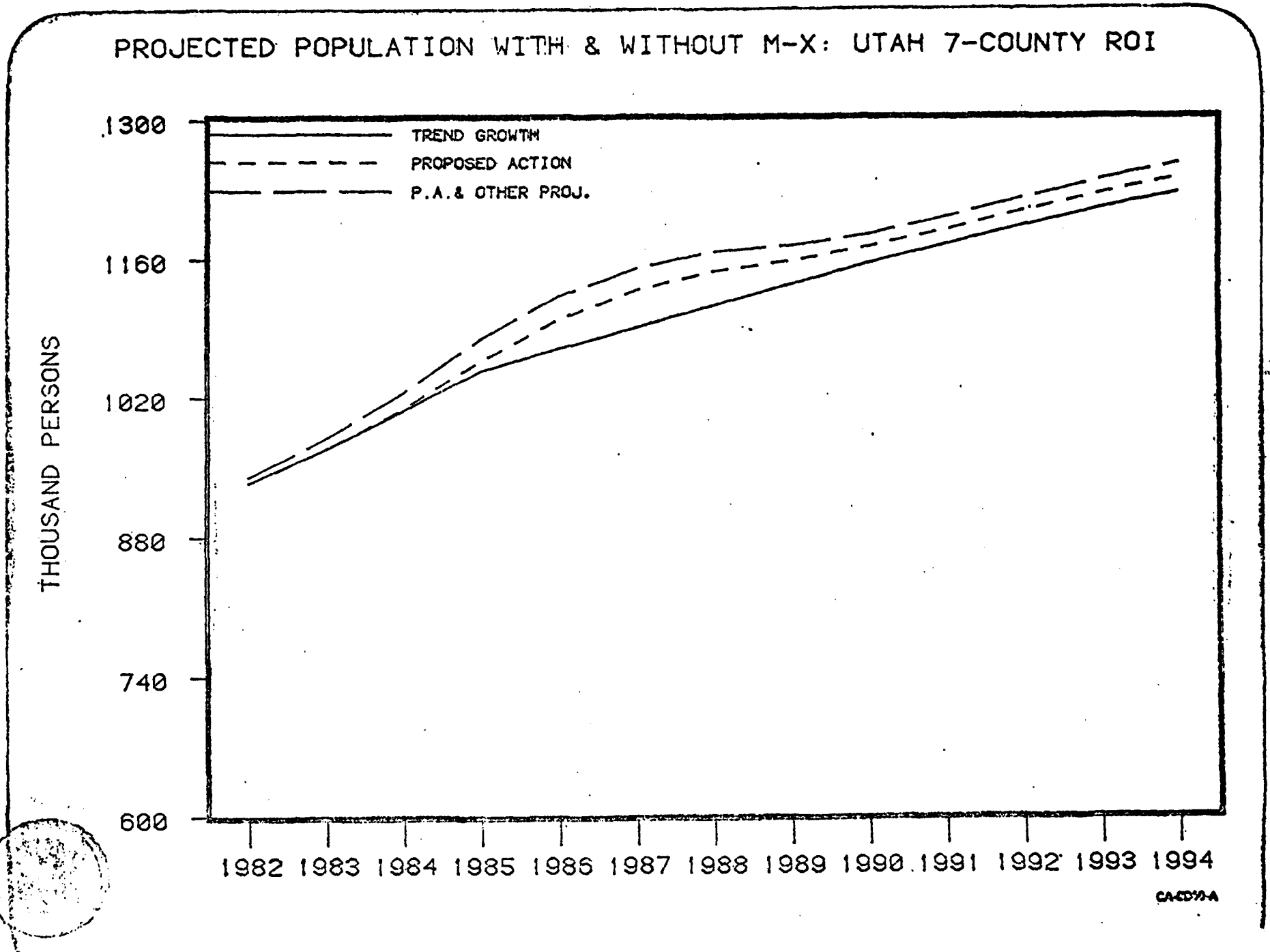
PRINCIPAL EMPLOYMENT TYPE	EMPLOYMENT	COMMUNITY	BASE	CAMP	TOTAL
SHELTER CONSTRUCTION	1305.	2438.	0.	810.	3248.
SHELTER ASSEMBLY AND CO.	360.	0.	0.	360.	360.
BASE CONSTRUCTION	945.	1766.	663.	0.	2428.
BASE ASS. AND CO.	0.	0.	0.	0.	0.
OPERATIONS,MILITARY	1080.	543.	2173.	0.	2716.
OPERATIONS, CIVILIANS	180.	402.	0.	0.	402.
INDIRECT EMPLOYMENT	2603.	3164.	0.	0.	3164.
TOTAL	6473.	8312.	2835.	1170.	12316.
NET INMIGRATION FROM PREV. YEAR		4059.	2738.	237.	7034.

LABOR FORCE IMPACTS

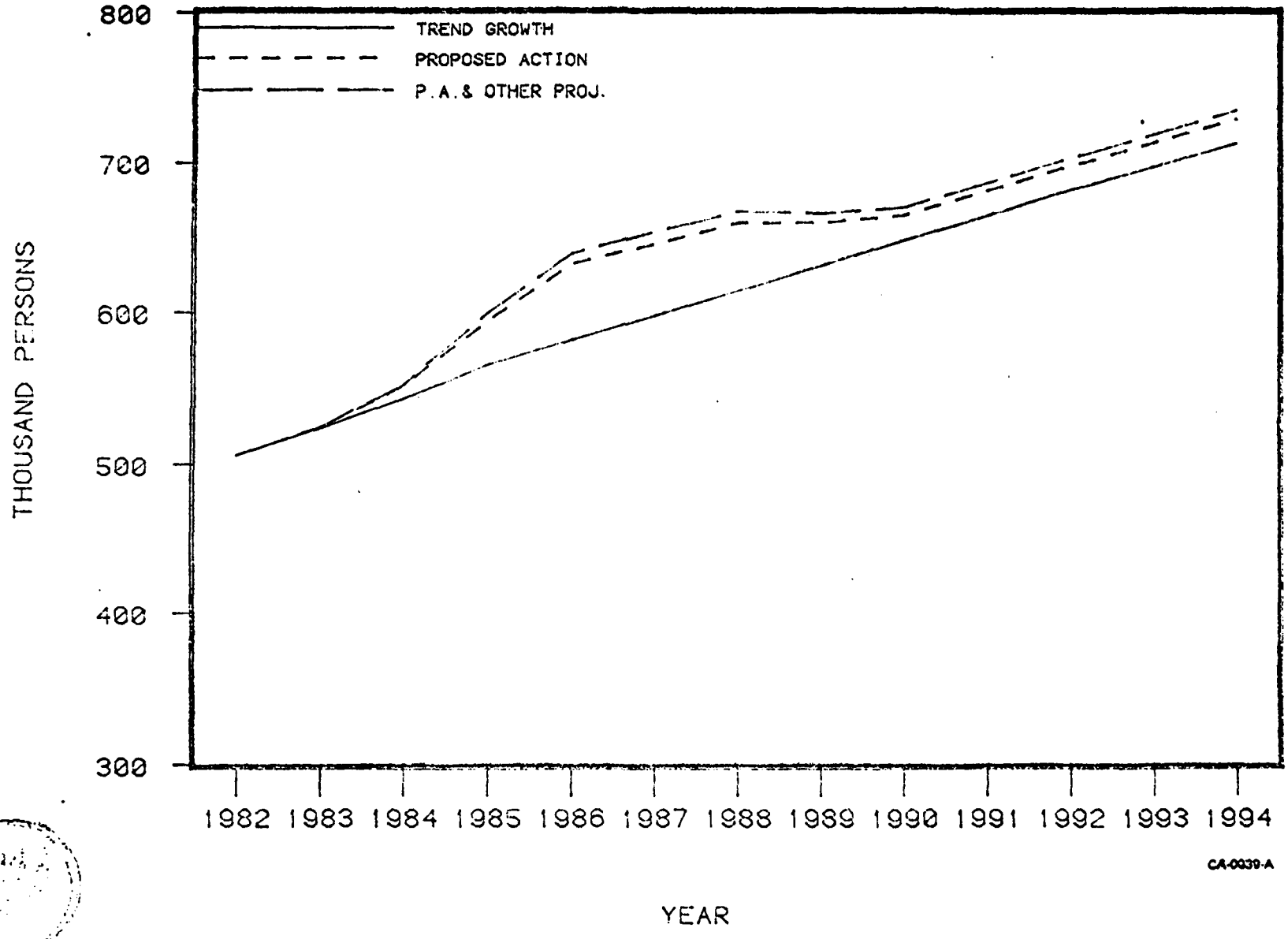
BASELINE POPULATION		11963.
BASELINE LF PARTICIPATION RATE		0.46
BASELINE LABOR FORCE		5524.
BASELINE EMPLOYMENT (LF CONCEPT)		5176.
BASELINE UNEMPLOYMENT		348.
UNEMPLOYMENT RATE		0.06
AVAILABLE RESIDENT LABOR FORCE		182.
-- FOR CONSTRUCTION	55.	
-- FOR OPERATIONS	36.	
-- FOR INDIRECT EMPLOYMENT	91.	
INMIGRANT CONSTRUCTION LABOR FORCE		2335.
INMIGRANT ASSEMBLY AND CHECKOUT LF		360.
INMIGRANT CIVILIAN OPS. LABOR FORCE		144.
INMIGRANT SECONDARY LABOR FORCE		1090.
ADDITIONAL INDIRECT LF INMIGRATION		1487.
TOTAL INMIGRANT LABOR FORCE		5416.
LABOR FORCE WITH PROJECT		10940.
EMPLOYMENT WITH PROJECT		10569.
UNEMPLOYMENT WITH PROJECT		371.
UNEMPLOYMENT RATE WITH PROJECT		0.03
POPULATION WITH PROJECT		24301.

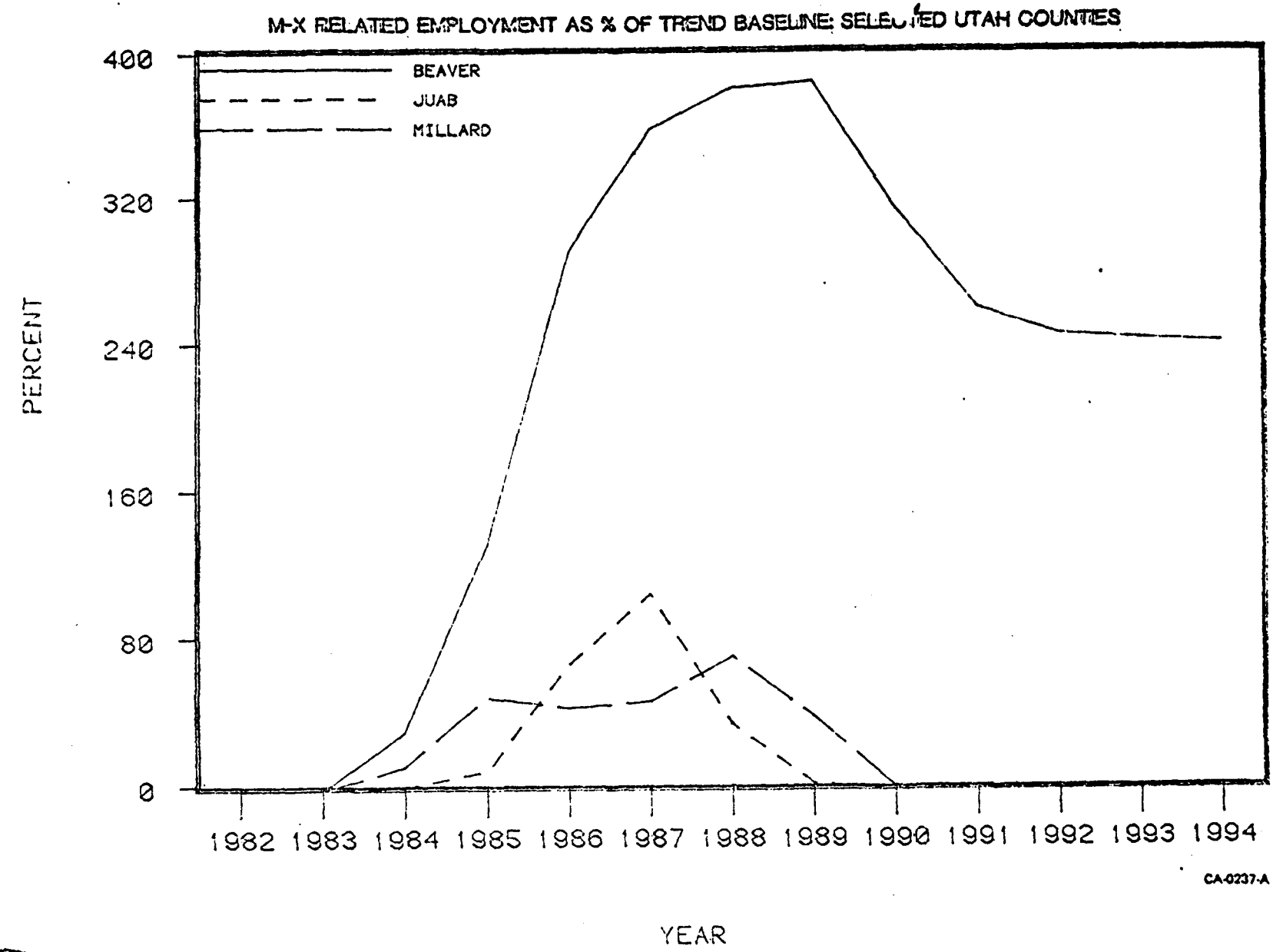
COMPUTATION OF INDIRECT EMPLOYMENT

IMPACT	FINAL DEMAND CHANGE	RIMS MULTIPLIER	CURRENT-YEAR GROSS OUTPUT CHANGE	EARNINGS CHANGE	EMPLOYMENT CHANGE
BASE PAYROLL EXPENDITURES	11777000.	1.866	15848085.	5093575.	392.
DOA PAYROLL EXPENDITURES	3409000.	1.866	5282579.	1697821.	131.
MAINTENANCE AND REPAIR OF MIL. FACILITIE	3000000.	1.904	4591135.	1772381.	136.
MOTOR FREIGHT TRANSPORTATION	44600.	2.124	56311.	26244.	2.
COMMUNICATIONS	44600.	1.807	56415.	20697.	2.
ELECTRIC SERVICES	0.	1.539	0.	0.	0.
GAS PRODUCTION AND DISTRIBUTION	44600.	1.818	56758.	10888.	1.
WATER SUPPLY AND SANITARY SERVICES	44600.	1.664	51950.	13999.	1.
WHOLESALE TRADE	44600.	1.877	58600.	21320.	2.
RETAIL TRADE	17840.	1.936	24177.	9762.	1.
PERSONAL SERVICES	17840.	1.944	24277.	8487.	1.
BUSINESS SERVICES	53520.	2.014	75452.	29513.	2.
PROFESSIONAL SERVICES	53520.	2.108	78974.	33523.	3.
OFFBASE HOUSING	23205854.	1.907	36973644.	12016630.	924.
STREET FACILITIES	4361985.	1.980	7795902.	2634785.	203.
SCHOOL FACILITIES	3596475.	1.851	4659952.	1419101.	109.
OTHER PUBLIC BUILDINGS	0.	1.843	0.	0.	0.
UTILITIES	8558070.	1.747	13532474.	4206890.	324.
RETAIL BUILDINGS	7416915.	1.754	10407205.	3253135.	250.
COMMERCIAL BUILDINGS	3444795.	1.823	5024105.	1570636.	121.
INDUSTRIAL BUILDINGS	0.	1.656	0.	0.	0.
TOTAL/AVERAGE	69135816.	1.513	104607992.	33839388.	2603.


PROJECTED POPULATION WITH & WITHOUT M-X: UTAH 7-COUNTY ROI
TREND GROWTH
PROPOSED ACTION
P.A.& OTHER PROJ.
THOUSAND PERSONS
1300
1160
1020
880
740
600
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994

PROJECTED POPULATION WITH AND WITHOUT M-X: NEVADA 5-COUNTY ROI



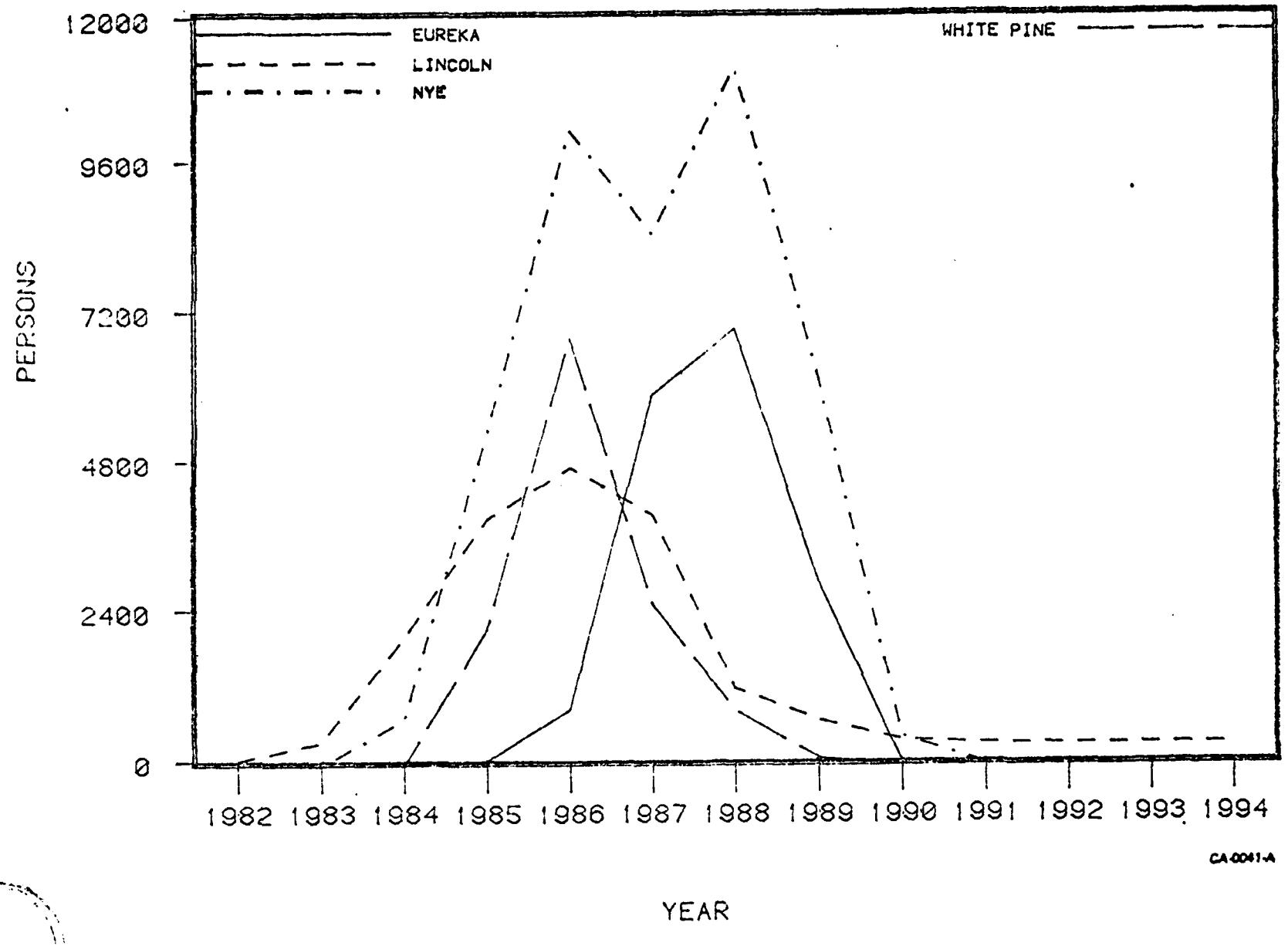

M-X RELATED EMPLOYMENT AS % OF TREND BASELINE: SELECTED UTAH COUNTIES
BEAVER
JUAB
MILLARD
400
320
240
160
80
0
PERCENT
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
YEAR
CA-0237-A

TOTAL NEVADA POPULATION CHANGE

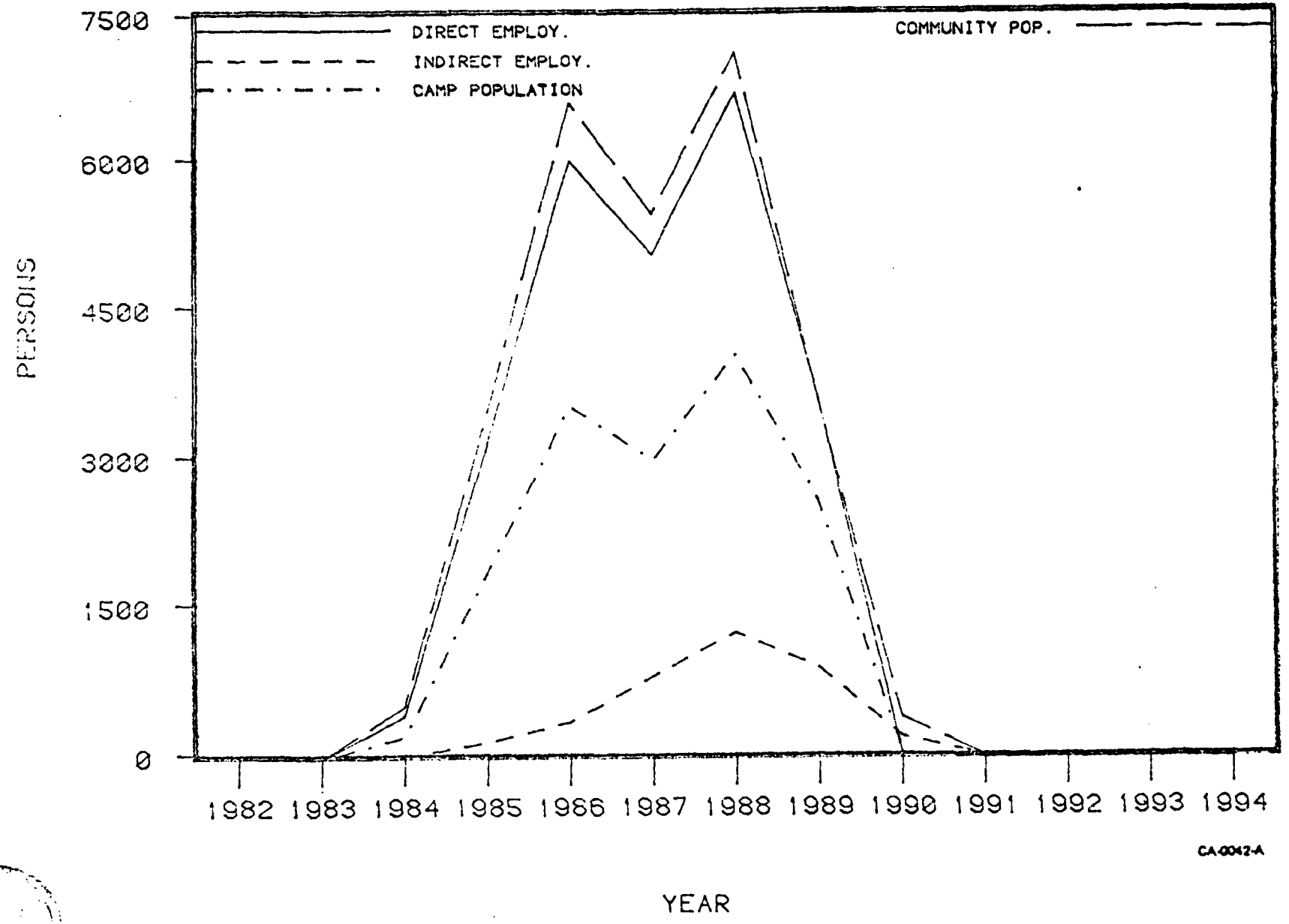
REGION/COUNTY	FULL DEPLOYMENT (PA) (M-X RELATED CHANGE)		SPLIT DEPLOYMENT (M-X RELATED CHANGE	
	PEAK YEAR	LONG-TERM	PEAK YEAR	LONG-TERM
NEVADA/UTAH REGION	85,229	31,096	37,225	16,027
NEVADA 5-COUNTY TOTAL	50,469	16,303	28,268	16,027
CLARK	27,826	15,967	20,614	15,841
EUREKA	6,981	0	3	0
LINCOLN	4,758	336	3,553	186
NYE	11,217	0	6,169	0
WHITE PINE	6,843	0	71	0

Source: DEIS, CH. 4, PT.II, PP. 4-310 TO 4-312;
ETR 2-A, P. 156-157 AND 171-172 (FOR STATE TOTALS).

M-X RELATED POPULATION CHANGE: SELECTED NEVADA CO., PROPOSED ACTION



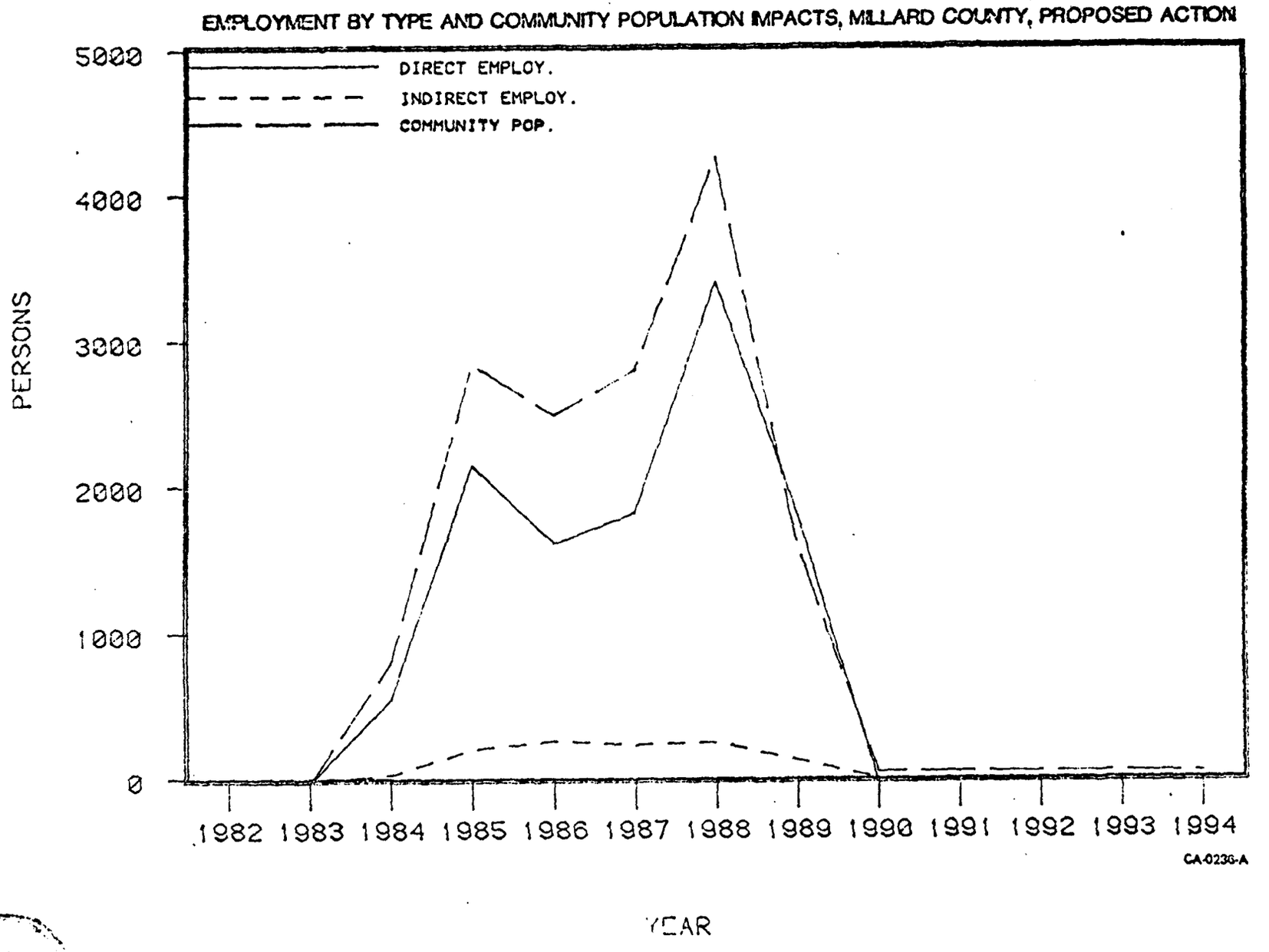
EMPLOYMENT & P .ULATION IMPACTS BY TYPE:NYE C .NTY, PROPOSED ACTION

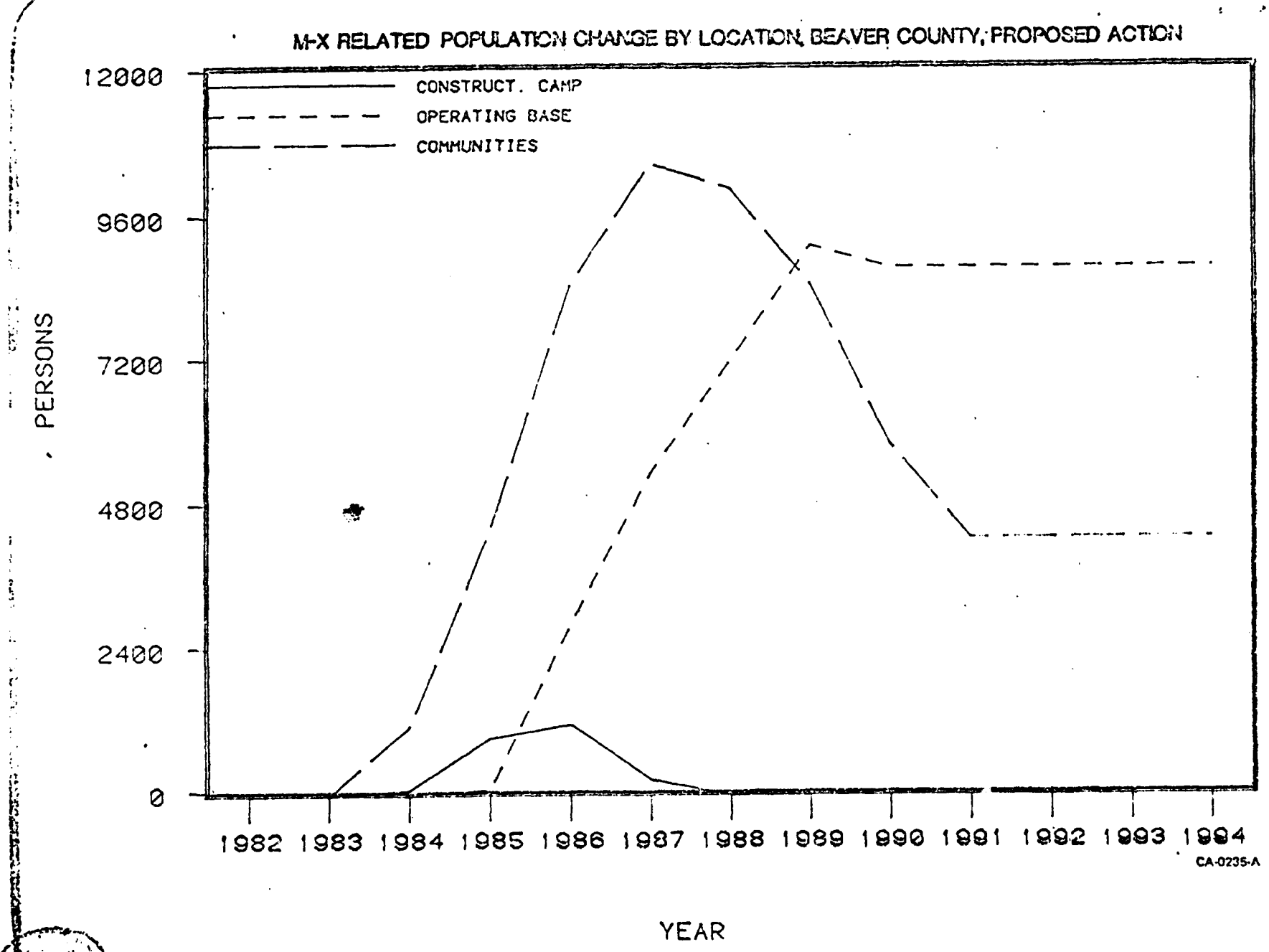


TOTAL UTAH POPULATION CHANGE

REGION/COUNTY	FULL DEPLOYMENT (PA)		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG-TERM	PEAK YEAR	LONG-TERM
NEVADA/UTAH REGION	85,229	31,096	37,225	16,027
UTAH 7-COUNTY TOTAL	37,578	14,793	8,957	0
BEAVER	17,655	13,071	4,187	0
IRON	2,072	1,452	387	0
JUAB	5,613	0	209	0
MILFORD	6,347	70	6,555	0
SALT LAKE/UTAH	9,356	0	0	0
WASHINGTON	640	200	8	0

SOURCE: DEIS, CH. 4, PT. II, PP. 4-310 TO 4-312; ETR 2-A, P. 156-157 AND P. 171-172 (FOR STATE TOTALS).


EMPLOYMENT BY TYPE AND COMMUNITY POPULATION IMPACTS, MILLARD COUNTY, PROPOSED ACTION
DIRECT EMPLOY.
INDIRECT EMPLOY.
COMMUNITY POP.
PERSONS
5000
4000
3000
2000
1000
0
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
YEAR
CA-0236-A


M-X RELATED POPULATION CHANGE BY LOCATION, BEAVER COUNTY, PROPOSED ACTION
CONSTRUCT. CAMP
OPERATING BASE
COMMUNITIES
12000
9600
7200
4800
2400
0
PERSONS
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
YEAR
CA-0235-A

QUALITY OF LIFE IN UTAH

- THE SMALLER, STATIC, AND MORE HOMOGENEOUS COMMUNITIES ARE THE ONES LIKELY TO BE IMPACTED THE MOST.
- THE LARGER, MORE DYNAMIC AND HETEROGENEOUS COMMUNITIES ARE THE ONES LIKELY TO BE BETTER ABLE TO COPE WITH THE CHANGE.
- GOVERNMENTAL, RELIGIOUS, EDUCATIONAL AND RECREATIONAL INSTITUTIONS WILL DIVERSIFY AND BECOME MORE HETEROGENEOUS IN THE IMPACTED COMMUNITIES.
- RELATIVE AND ABSOLUTE CHANGES WILL ALTER THE INTERCONNECTED SYSTEM OF LIVES AND INSTITUTIONS; NEIGHBORS MAY BECOME MORE DISTANT, THE STRUCTURE OF INSTITUTIONS MAY BECOME MORE FORMALIZED.
- CERTAIN RELATED, TRADITIONAL, AND ISOLATED CULTURAL WAYS WILL BE REPLACED BY A MORE PROGRESSIVE AND COMPETITIVE CULTURE.
- RESIDENT ROLES WILL BE CHANGED AND REDEFINED, MORE PEOPLE WITH DIFFERENT BEHAVIORAL CHARACTERISTICS WILL BE PRESENT, AND EACH INDIVIDUAL WILL BECOME A SMALLER PART OF THE LARGER WHOLE.
- THE SPLIT-DEPLOYMENT ALTERNATIVE DEPLOYS THE SYSTEM IN A WAY DESIGNED TO REDUCE THE COMMUNITY SPECIFIC IMPACTS.

QUALITY OF LIFE IN UTAH

- SINCE THE QUALITY OF LIFE DOES MEAN DIFFERENT THINGS TO DIFFERENT PEOPLE, SOME WILL EXPRESS ANTAGONISM, EVEN FEAR, AT WHAT THEY PERCEIVE TO BE A THREAT TO OR LOSS OF THEIR LIFESTYLE; OTHERS WILL HERALD THE CHANGE AND PROCLAIM THE TOTAL BENEFITS OF NEW GROWTH AND NEW VITALITY .

- SOCIOLOGISTS AND OTHERS GENERALLY AGREE THAT GROWTH IN EXCESS OF 15 PERCENT PER YEAR AND PERSISTING OVER SEVERAL YEARS CAN STRAIN SOCIAL ORGANIZATION AND THE ADEQUACY OF HOUSING, SOCIAL SERVICES AND OTHER INFRASTRUCTURE. BEAVER, IRON AND JUAB COUNTIES ARE PARTICULARLY LIKELY TO BE AFFECTED UNDER THE PROPOSED ACTION, WHILE ONLY MILLARD IS LIKELY TO BE AFFECTED IN THIS REGARD WITH SPLIT DEPLOYMENT.

- ALL COMMUNITIES WITHIN THE DEPLOYMENT REGION WILL UNDERGO A CHANGE DURING CONSTRUCTION WHICH WILL ALTER THE PRESENT RESIDENTS' QUALITY OF LIFE. THE DEGREE OF IMPACT IS LIKELY TO BE A FUNCTION OF THEIR PROXIMITY TO THE RESPECTIVE OB LOCATIONS AND THE DDA FACILITIES.

- BENEFICIAL IMPACTS WILL BE MOST NOTICEABLE NEAR OPERATING BASE LOCATIONS AND WILL INCLUDE ECONOMIC IMPACTS SUCH AS GREATER ECONOMIC STABILITY AND DIVERSITY AS WELL AS MORE AND BETTER PAYING JOBS. NON-ECONOMIC BENEFITS INCLUDE BETTER HEALTH CARE AND COMMUNITY FACILITIES AND GREATER EDUCATIONAL OPPORTUNITIES.

NEVADA/UTAH NATIVE AMERICAN CONCERNS: (GENERAL)

POTENTIAL IMPACTS ARE PERCEIVED IN THE FOLLOWING AREAS:

- CONTEMPORARY ISSUES
  - WATER RIGHTS
  - SOCIAL EFFECTS/DISRUPTION OF CULTURAL VALUES
  - GRAZING PERMITS
  - LANDS FOR RESERVATION WITHDRAWAL
  - EMPLOYMENT
  - PUBLIC SERVICES
  - HOUSING
- IMPACTS TO TRADITIONAL RELIGIOUS SYSTEMS AND SPECIFIC SACRED AREAS
  - PHYSIOGRAPHIC FEATURES
  - ROCK ART SITES
  - SACRED HOT AND COLD SPRINGS
  - BURIAL AND CREMATION SITES
  - DWELLING PLACES OF SPIRITUAL BEINGS
  - DISRUPTION OF ANCESTRAL/HISTORICAL OCCUPATION SITES

NEVADA/UTAH NATIVE AMERICAN CONCERNS: (GENERAL)

(Page 2 of 2)

- DISRUPTION OF CONTEMPORARY USE PATTERNS OF NATURAL RESOURCES
  - FOOD-GATHERING, HUNTING, AND FISHING
  - MEDICINAL PLANT SPECIES
  - CRAFT MATERIALS
  - MINERAL RESOURCES

NATIVE AMERICANS - NEVADA

- SHORT-TERM CULTURAL EFFECTS. THERE ARE 30 KNOWN ANCESTRAL/SACRED SITES WITHIN ONE MILE OF THE PROPOSED ACTION CONCEPTUAL LAYOUT FACILITIES. MANY OTHERS EXIST, BUT THEIR LOCATION IS UNKNOWN.

- LONG-TERM CULTURAL EFFECTS. WITH CUMULATIVE EFFECTS OF CONSTRUCTION AND INDIRECT EFFECTS OF PUBLIC ACCESSIBILITY DURING OPERATIONS, IT IS ESTIMATED THAT AT LEAST 230 SITES COULD BE DISTURBED BY THE PROPOSED ACTION.

- FOR SPLIT BASING, SHORT TEAM, 13 KNOWN SITES ARE LOCATED WITHIN ONE MILE OF THE FACILITIES, AND OVER 80 COULD BE DISTURBED DURING THE LONG-TERM.

- SUPPORT COMMUNITY DEVELOPMENT NEAR MILFORD COULD POSSIBLY IMPACT THE WATER RESOURCES OF THE MOAPA RESERVATION.

- THE MOAPA RESERVATION AND THE ELY COLONY COULD BE AFFECTED BY LARGE-SCALE MIGRATION IN RESPONSE TO ECONOMIC OPPORTUNITIES.

NATIVE AMERICANS—UTAH

- SHORT-TERM

  THERE ARE NINE KNOWN ANCESTRAL/SACRED SITES WITHIN ONE MILE OF THE CONCEPTUAL PROJECT LAYOUT FOR THE PROPOSED ACTION. MANY OTHERS EXIST, BUT THEIR LOCATION IS UNKNOWN.

- LONG-TERM

  WITH CUMULATIVE EFFECTS OF CONSTRUCTION PLUS INDIRECT EFFECTS OF PUBLIC ACCESSABILITY DURING OPERATIONS, IT IS ESTIMATED THAT AT LEAST 65 SUCH SITES COULD BE DISTURBED BY THE PROPOSED ACTION.

- FOR SPLIT-BASING, FOR SHORT-TERM, THREE KNOWN SITES ARE LOCATED WITHIN ONE MILE OF THE FACILITIES, AND OVER 60 COULD BE DISTURBED DURING THE LONG-TERM.

- SUPPORT COMMUNITY DEVELOPMENT NEAR MILFORD COULD POSSIBLY IMPACT THE WATER RESOURCES OF THE KWIUMPITS BAND OF THE SOUTHERN PAIUTES.

- NATIVE AMERICAN RESERVATIONS AND COLONIES NEAR MILFORD COULD BE INVOLVED IN LARGE-SCALE MIGRATION IN RESPONSE TO ECONOMIC OPPORTUNITIES

TOTAL NEVADA HOUSING UNITS

REGION/COUNTY	FULL DEPLOYMENT (M-X RELATED CHANGE)		SPLIT DEPLOYMENT (M-X RELATED CHANGE)	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	20,002	3,202	7,778	1,078
NEVADA	11,578	1,142	5,944	1,078
NEVADA COUNTIES				
CLARK	6,860	1,016	4,459	1,008
EUREKA	1,473	0	1	0
LINCOLN	1,015	126	754	70
NYE	2;151	0	1,140	0
WHITE PINE	1,508	0	21	0

SOURCE: DEIS, VOL. IV, PART II, PP. 4-325-327; AND ETR-2A, PP. 259-282 (FOR NEVADA SUB-REGION).

TOTAL UTAH HOUSING UNITS

REGION/COUNTY	FULL DEPLOYMENT (M-X RELATED CHANGE)		SPLIT DEPLOYMENT (M-X RELATED CHANGE)	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	20,002	3,202	7,778	1,078
UTAH	9,964	2,060	1,834	0
UTAH COUNTIES				
BEAVER	3,626	1,484	840	0
IRON	716	475	143	0
JUAB	1,070	0	63	0
MILLARD	1,287	26	1,295	0
UTAH/SALT LAKE	3,509	0	0	0
WASHINGTON	240	75	3	0

SOURCE: DEIS, VOL. IV, PART II, PP. 4-325-327; AND ETR-2A, PP. 259-282 (FOR UTAH SUB-REGION).

EDUCATION

- IMPACTS ON EDUCATIONAL SERVICES ARE MEASURED IN THREE WAYS:
  - TEACHERS REQUIRED TO SERVE THE INCREASED ENROLLMENTS
  - REVENUES AND EXPENDITURES OF SCHOOL DISTRICTS
  - CAPITAL COST OF PROVIDING NEW SCHOOL FACILITIES
- TEACHER REQUIREMENTS ARE CALCULATED FROM PUPIL/TEACHER RATIOS AT GRADE LEVEL
- SCHOOL DISTRICT EXPENDITURES ARE CALCULATED ON COUNTY/SCHOOL DISTRICT-SPECIFIC RATES PER PUPIL
- SCHOOL DISTRICT REVENUES INCLUDE LOCAL, STATE AND FEDERAL CONTRIBUTIONS PER PUPIL AT CURRENT RATES. PL 81-874 IMPACT FUNDS ALSO INCLUDED
- GENERALLY SCHOOL DISTRICTS SHOW NET DEFICITS IN THE EARLY YEARS AND SURPLUSES IN THE LATER PHASES. DEPENDENT ON PL 81-874 FUNDS
- CAPITAL COST OF NEW FACILITIES IS BASED ON THE NUMBER OF NEW PUPILS, THE AREA (SQ. FT) REQUIRED PER PUPIL, AND THE COST OF CONSTRUCTION PER SQ. FT.

TEACHER REQUIREMENTS IN NEVADA

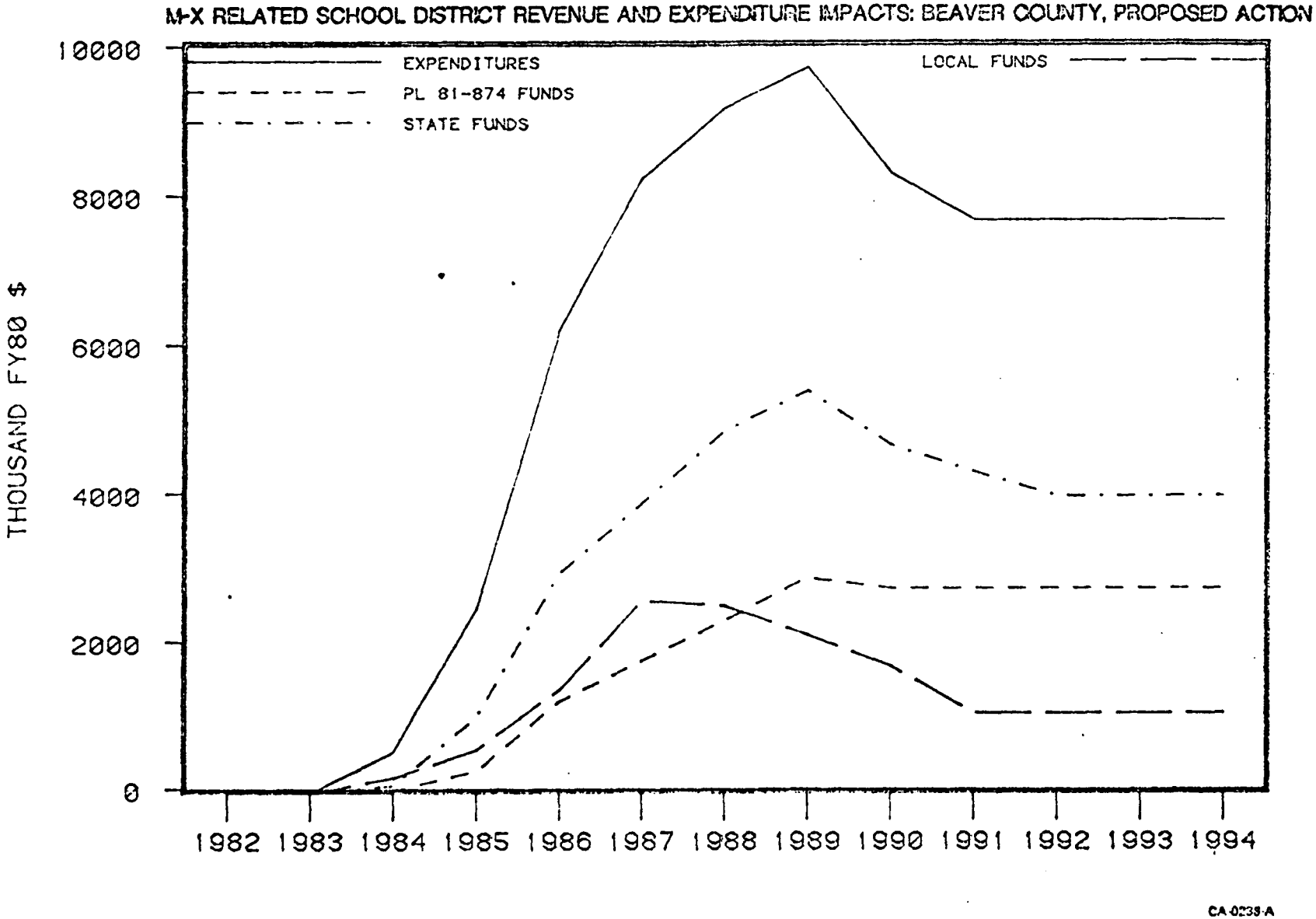
REGION/COUNTY	FULL DEPLOYMENT (M-X RELATED CHANGE)		SPLIT DEPLOYMENT (M-X RELATED CHANGE)	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	826	386	348	204
NEVADA STATE	474	207	274	204
CLARK	248	204	202	202
EUREKA	72	0	0	0
LINCOLN	49	3	36	2
NYE	104	0	55	0
WHITE PINE	73	0	1	0

SOURCES: DEIS, VOL. IV, PART II, PP. 361-363; ETR 2A, PP. 405-436.

TEACHER REQUIREMENTS IN UTAH

REGION/COUNTY	FULL DEPLOYMENT (M-X RELATED CHANGE)		SPLIT DEPLOYMENT (M-X RELATED CHANGE)	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	826	386	348	204
UTAH STATE	368	179	85	0
BEAVER	200	158	41	0
IRON	23	18	4	0
JUAB	52	0	3	0
MILLARD	62	1	63	0
UTAH/SALT LAKE	79	9	0	0
WASHINGTON	5	2	0	0

SOURCES: DEIS, VOL. IV, PART II, PP. 361-363; ETR 2A, PP. 405-436.


M-X RELATED SCHOOL DISTRICT REVENUE AND EXPENDITURE IMPACTS: BEAVER COUNTY, PROPOSED ACTION
EXPENDITURES
PL 81-874 FUNDS
STATE FUNDS
LOCAL FUNDS
THOUSAND FY80 $
10000
8000
6000
4000
2000
0
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
CA-0233-A

SCHOOL DISTRICT CAPITAL EXPENDITURE REQUIREMENTS IN UTAH
(IN THOUSANDS OF 1980 DOLLARS)

REGION/COUNTY	FULL DEPLOYMENT		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG-TERM	PEAK YEAR	LONG-TERM
NEVADA/UTAH REGION	101,000	40,100	42,000	21,300
UTAH	44,000	18,600	11,400	0
BEAVER	20,900	16,500	4,200	0
IRON	1,800	2,300	400	0
JUAB	5,400	0	300	0
MILLARD	6,500	100	6,500	0
SALT LAKE/UTAH	8,300	0	0	0
WASHINGTON	600	200	0	0

SOURCE: ETR 2, PP. 131-2; HDR SCIENCES

SCHOOL DISTRICT CAPITAL EXPENDITURE REQUIREMENTS IN NEVADA
(IN THOUSANDS OF 1980 DOLLARS)

REGION/COUNTY	FULL DEPLOYMENT		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG-TERM	PEAK YEAR	LONG-TERM
NEVADA/UTAH REGION	100,900	40,100	42,000	21,300
NEVADA STATE	56,900	21,500	30,600	21,300
CLARK	25,900	21,200	21,100	21,100
EUREKA	7,400	0	0	0
LINCOLN	5,100	300	3,700	200
NYE	10,800	0	5,800	0
WHITE PINE	7,600	0	0	0

SOURCE: ETR 2, PP. 131-2; HDR SCIENCES.

M-X INDUCED CHANGES IN LOCAL GOVERNMENT FINANCES IN NEVADA
(IN THOUSANDS OF 1980 DOLLARS)

REGION/COUNTY	FULL DEPLOYMENT		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	- 13,908	+ 170	- 6,216	+ 489
NEVADA SUBREGION (% OF NEVADA/UTAH REGION)	- 7,589 (54.6)	+ 483 -	- 4,818 (77.5)	489 (100)
CLARK	- 3,762	+ 494	- 3,310	+ 490
EUREKA	- 1,497	0	0	0
LINCOLN	- 636	- 11	- 478	- 1
NYE	- 1,625	0	- 1,025	0
WHITE PINE	- 1,640	0	- 19	0

SOURCES: DEIS, VOL. IV, PART II, PP. 341-343

M-X INDUCED CHANGES IN LOCAL GOVERNMENT FINANCES IN UTAH
(IN THOUSANDS OF 1980 DOLLARS)

REGION/COUNTY	FULL DEPLOYMENT		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG TERM	PEAK YEAR	LONG TERM
NEVADA/UTAH REGION	-13,908	+170	-6,216	+489
UTAH SUBREGION	-6,319	-314	-1,399	0
(% OF NEVADA/UTAH REGION)	(45.4)	—	(22.5)	(0)
BEAVER	-1,866	-227	-713	0
IRON	-407	-77	-82	0
JUAB	-790	0	-62	0
MILLARD	-869	2	-1,243	0
UTAH/SALT LAKE	-2,970	0	0	0
WASHINGTON	-143	-12	0	0

SOURCE: DEIS, VOL. IV, PART II, PP. 341-343

M-X INDUCED LOCAL GOVERNMENT CAPITAL EXPENDITURE REQUIREMENTS IN UTAH
(IN THOUSANDS OF 1980 DOLLARS)

REGION/COUNTY	FULL DEPLOYMENT		SPLIT DEPLOYMENT	
	PEAK YEAR	LONG-TERM	PEAK YEAR	LONG-TERM
NEVADA/UTAH REGION	218,268	58,445	85,781	27,467
UTAH SUBREGION (% OF NEVADA/UTAH REGION)	96,408 (44.2)	30,312 (51.9)	23,819 (27.8)	0 (0)
BEAVER	39,417	24,926	8,997	0
IRON	5,998	4,562	1,063	0
JUAB	10,829	0	634	0
MILLARD	12,979	211	13,101	0
UTAH/SALT LAKE	25,416	0	0	0
WASHINGTON	1,769	613	24	0

SOURCE: DEIS, VOL. IV, PART II, PP. 344-346.

SECONDARY EFFECTS ON M-X DEPLOYMENT

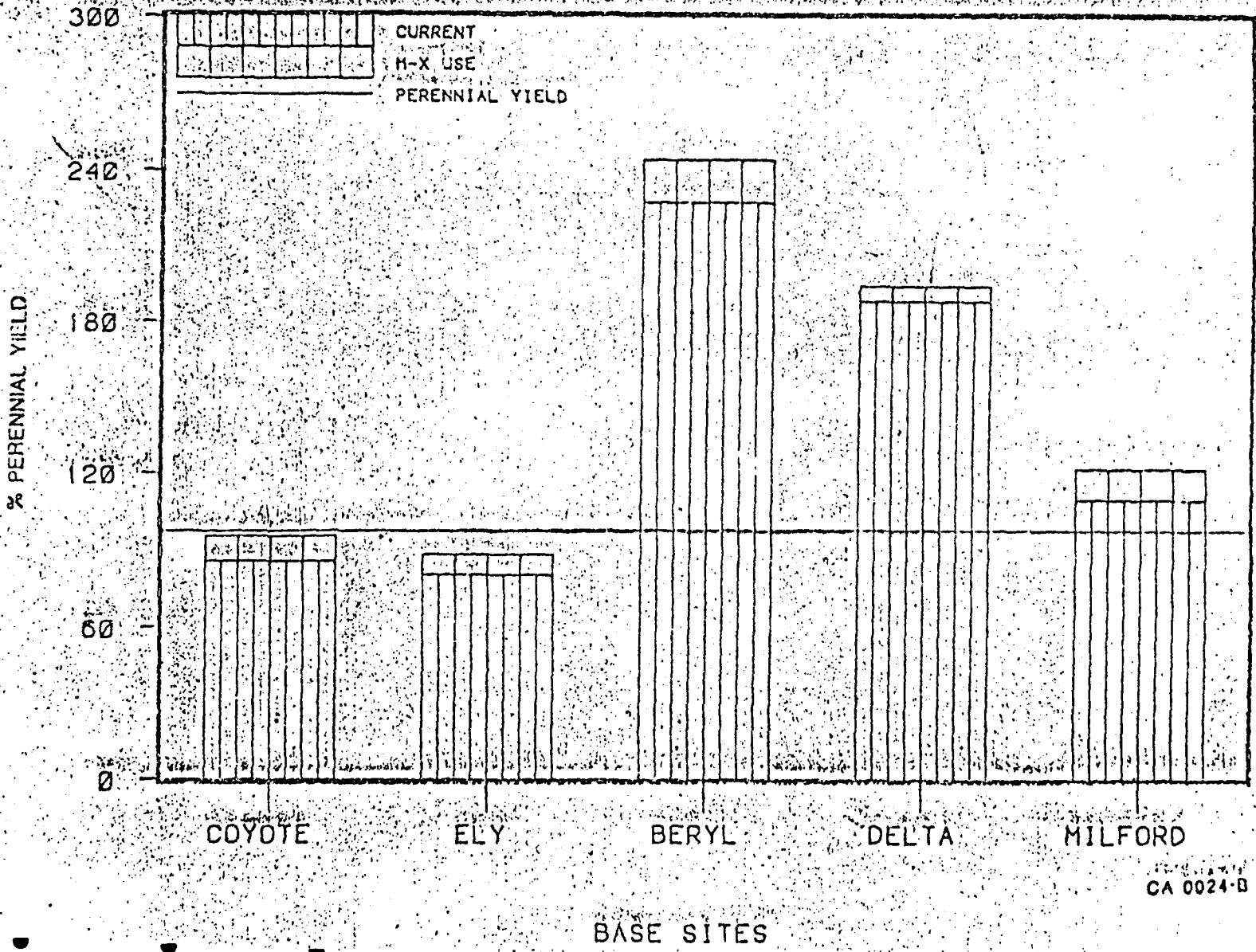
- QUALITY OF LIFE
- NATIVE AMERICANS
- FAUNA
- WATER
- RANCHING
- HOUSING
- CONSTRUCTION RESOURCES
- EDUCATION
- FISCAL IMPACTS

Construction quantities for operating base.

ITEM	OB	DAA	OBTS
Earthwork, CY	4,200,000	463,000	126,000
Concrete, CY	874,000	33,000	4,500
Aggregate, T	4,600,000	346,000	36,000
Water, Ac-ft	1,800	150	30

2506-1

ANNUAL WATER USE AS PERCENT OF PERENNIAL YIELD FOR OB SITES



OB construction demands.

OB TYPE	OB CONSTRUCTION DEMANDS $x10^3$ ACRE-FT	
	RANGE	MPQ
First OB	2.0 - 3.6	2.8
Second OB	1.7 - 3.1	2.4

Comparison of total water requirements.

ALTERNATIVES	TOTAL DDA CONSTRUCTION WATER REQUIREMENTS[1] (X 10^3 ACRE-FT)		TOTAL OB CONSTRUCTION WATER REQUIREMENTS[2] (X 10^3 ACRE-FT)		30-YEAR PERMANENT OPERATIONAL WATER REQUIREMENTS (X 10^3 ACRE-FT)[3]		TOTAL WATER REQUIREMENTS (X 10^3 ACRE-FT	
	RANGE	MPQ[4]	RANGE	MPQ	RANGE	MPQ	RANGE	MPQ
Proposed Action	82-144	120	3.6-6.7	5.2	225-420	330	310-570	455
Alternatives 1 through 6	82-144	120	3.6-6.7	5.2	225-420	330	310-570	455
Alternative 7	52-101	78	3.6-6.7	5.2	250-480	360	305-588	443
Alternative 8	67-118	96	3.9-7.3	5.6	230-375	330	301-500	432

3870-1

[1]DDA construction water requirements include no water for irrigation in Texas and New Mexico, but does include water for irrigation of protective structure sites in Nevada and Utah.

[2]OB construction water requirements include OBTS and DAA facilities.

[3]Permanent operational water requirements include water for both operating bases and the major impacted communities with 80 percent military onbase housing.

[4]MPQ - Most Probable Quantity.

Source: Air Force and HDR Sciences.

4089-A

Table 4.3.1.7-2. Potential overall impact to sage grouse which could result from construction of operating bases for the Proposed Action and Alternatives 1-4.

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	ESTIMATED OVERALL IMPACT[1]				
NO.	NAME		PROPOSED ACTION COYOTE SPRING/ MILFORD	ALT. 1 COYOTE SPRING/ BERYL	ALT. 2 COYOTE SPRING/ DELTA	ALT. 3 BERYL/ ELY	ALT. 4 BERYL/ COYOTE SPRING
	Subunits or Counties within OB Suitability Area						
46	Sevier Desert						
50	Milford[2,4]						
52	Lund District						
53	Beryl-Enterprise						
179	Steptoe						
210	Coyote Spring						
219	Muddy River Springs						
	Curry, NM Hartley, TX[3,4]						
	Other Affected Subunits or Counties						
4	Snake						
5	Pine						
9	Government Creek						
48	Beaver						
49	Parowan						
50	Milford[2]						
51	Cedar						
154	Newark[3]						
155	Little Smoky—N & S						
174	Jakes						
175	Long						
176	Butte						
180	Cave						
183	Lake						
184	Spring						
185	Tippet						
196	Hamlin						
198	Dry						
201	Spring						
202	Patterson						
207	White River[3]						
	Overall Alternative Impact						

3831-2

[1]

No impact. (No sage grouse present for Abundance Index.)

Low impact.

Moderate impact. (Sage grouse range present for Abundance Index.)

High (significant) impact. (Sage grouse range and key habitat present for Abundance Index.)

[2]Conceptual location of Area Support Center (ASC) for Proposed Action and Alternatives 1-6.

[3]Conceptual location of Area Support Center (ASC) for Alternative 7.

[4]Conceptual location of Area Support Center (ASC) for Alternative 8.

Table 4.3.1.7-3. Potential overall impact to sage grouse which could result from construction to operating bases for Alternatives 5-8.

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	ESTIMATED OVERALL IMPACT[1]			
NO.	NAME		ALT. 5 MILFORD/ ELY	ALT. 6 MILFORD/ COYOTE SPRING	ALT. 7 CLOVIS/ DALHART	ALT. 8 COYOTE SPRING/ CLOVIS
	Subunits or Counties within OB Suitability Area					
46	Sevier Desert					
50	Milford[2,4]					
52	Lund District					
53	Beryl-Enterprise					
179	Steptoe					
210	Coyote Springs					
219	Muddy River Springs					
	Curry, NM Hartley, TX[3]					
	Other Affected Subunits or Counties					
4	Snake					
5	Pine					
9	Government Creek					
48	Beaver					
49	Parowan					
50	Milford[2,4]					
51	Cedar					
154	Newark[3]					
155	Little Smoky NRS					
174	Jake					
175	Long					
178	Butte					
180	Cave					
183	Lake					
184	Spring					
185	Tippet					
198	Hamlin					
199	Dry					
201	Spring					
202	Patterson					
207	White River[3]					
	Overall Alternative Impact					

3832-1

[1] No impact. (No sage grouse present for Abundance Index.)
Low impact.
Moderate impact. (Sage grouse range present for Abundance Index.)
High (significant) impact. (Sage grouse range and key habitat present for Abundance Index.)

[2] Conceptual location of Area Support Center (ASC) for Proposed Action and Alternatives 1-6.

[3] Conceptual location of Area Support Center (ASC) for Alternative 7.

[4] Conceptual location of Area Support Center (ASC) for Alternative 8.

Table 4.3.1.7-1. Potential impact to sage grouse in Nevada/Utah DDA for the Proposed Action and Alternatives 1-6.

HYDROLOGIC SUBUNIT NO.	HYDROLOGIC SUBUNIT NAME	ABUNDANCE INDEX[1]	SHORT- AND LONG-TERM IMPACTS OF KNOWN SAGE GROUSE RANGE AND KEY HABITATS: % OF HYDRO-SUBUNIT RANGE DISTURBED	% OF LEK SITES DISTURBED	% OF BROOD-USE AREAS DISTURBED	% OF WINTERING GROUNDS DISTURBED	ESTIMATED SHORT- & LONG-TERM IMPACT[1,3]
	Subunits with M-X Clusters and DTN						
4	Snake		0	0	0	0	
5	Pine		2	0	0	0	
6	White		0	0	0	0	
7	Fish Springs		0	0	0	0	
8	Dugway		0	0	0	0	
9	Government Creek		0	0	0	0	
46	Sevier Desert		0	0	0	0	
46A	Sevier Desert & Dry Lake[2]		0	0	0	0	
54	Wah Wah		0	0	0	0	
137A	Big Smoky-Tonopah Flat		1	0	14	0	
139	Kobeh		1	45	26	2	
140A	Monitor—Northern		1	23	9	0	
140B	Monitor—Southern						
141	Reloton		0	0	0	0	
142	Alkali Spring		0	0	0	0	
148	Cactus Flat		0	0	0	0	
149	Stone Cabin[2]		1	0	0	0	
151	Antelope		2	100	1	0	
154	Newark[2]		1	15	0	0	
155A	Little Smoky—Northern		0	0	0	0	
155C	Little Smoky—Southern						
156	Hot Creek		0	0	0	0	
170	Penoyer		0	0	0	0	
171	Coal		0	0	0	0	
172	Garden		1	0	67	0	
173A	Railroad—Southern		3	0	8	0	
173B	Railroad—Northern						
174	Jakes		1	33	0	0	
175	Long		1	100	0	0	
178B	Butte—South		1	50	0	1	
179	Steptoe		0	0	0	0	
180	Cave		1	0	0	0	
181	Dry Lake[2]		0	0	0	0	
182	Delamar		0	0	0	0	
183	Lake		1	100	57	0	
184	Spring		1	0	0	0	
186	Hamlin		2	0	67	0	
202	Patterson		0	0	0	0	
207	White River[2]		1	0	0	0	
208	Pahroc		0	0	0	0	
209	Pahranagat		0	0	0	0	
	Overall DDA Impact		1%	22%	7%	1%	

3830-4

[1] No significant impact.

Low abundance levels.

Moderate impact or intermediate abundance levels.

High impact or high abundance levels.

[2] Conceptual location of Area Support Center (ASC).

[3] Long term impact is less than short-term impact by an undetermined amount (see text). This is a worst case analysis.

Table 4.3.1.8-4. Potential impact to bighorn sheep in Nevada/Utah DDA for Alternative 8.

HYDROLOGIC SUBUNIT NO.	HYDROLOGIC SUBUNIT NAME	ABUNDANCE INDEX[1]	SHORT-TERM IMPACTS[2,3]	LONG-TERM IMPACTS[2,3]
	Subunits or Counties with M-X Clusters and DTN			
4	Snake			
5	Pine			
6	White			
7	Fish Springs			
46	Sevier Desert			
46A	Sevier Desert-Dry Lake[4]			
54	Wah Wah			
155C	Little Smoky - Southern			
156	Hot Creek			
170	Penoyer			
171	Coal			
172	Garden			
173A	Railroad - Southern			
173B	Railroad - Northern			
180	Cave			
181	Dry Lake[4]			
182	Delamar			
183	Lake			
184	Spring			
196	Hamlin			
202	Patterson			
207	White River			
	Bailey, TX			
	Cochran, TX			
	Dallam, TX			
	Deaf Smith, TX			
	Hartley, TX[4]			
	Hockley, TX			
	Lamb, TX			
	Oldham, TX			
	Parmer, TX			
	Chaves, NM			
	Curry, NM			
	DeBaca, NM			
	Guadalupe, NM			
	Harding, NM			
	Lea, NM			
	Quay, NM			
	Roosevelt, NM[4]			
	Union, NM			
	Overall DDA Impact			

3905-2

[1,2]

- No impact (No animals present for Abundance Index).
- Moderate impact. (Less than 150 present for Abundance Index).
- High (significant) impact. (More than 150 present for Abundance Index.)

[3]Potential for impact was determined using the abundance of bighorn sheep and presence of a construction camp within 25 mi (40 km) of bighorn habitat.

[4]Conceptual location of Area Support Centers (ASCs).

Table 4.3.1.8-3. Potential impact to bighorn sheep resulting from construction and operation of M-X operating bases for Alternatives 5-8.

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	ESTIMATED OVERALL IMPACT[2,3]			
			ALT. 5	ALT. 6	ALT. 7	ALT. 8
NO.	NAME		MILFORD/ ELY	MILFORD/ COYOTE SPRING	CLOVIS/ DALHART	COYOTE SPRING/ CLOVIS
	Subunits or Counties within OB Suitability Area					
46	Sevier Desert					
46A	Sevier Desert & Dry Lake[4]					
50	Milford[4]					
52	Land District					
53	Beryl-Enterprise					
179	Steptoe					
210	Coyote Spring					
219	Muddy River Springs					
	Curry, NM Hartley, TX[4]					
	Other Affected Subunits or Counties					
1698	Tikaboo					
206	Kane Spring					
216	Garnet					
217	Hidden Valley					
218	California-Wash					
	Overall Alternative Impact					

3905-2

[1,2]

- No impact. (No animals present for Abundance Index.)
- Moderate impact. (Less than 150 present for Abundance Index.)
- High (significant) impact. (More than 150 present for Abundance Index.)

[1]Potential for impact was determined using the abundance of bighorn sheep and an indirect effect index developed by a model further described in ETA-30.

[4]Conceptual location of Area Support Centers (ASCs).

Table 4.3.1.8-2. Potential impact to bighorn sheep resulting from construction and operation of M-X operating bases for the Proposed Action and Alternative 1-4.

HYDROLOGIC SUBUNIT OR COUNTY NO.	NAME	ABUNDANCE[1] INDEX	ESTIMATED OVERALL IMPACT[2,3] PROPOSED ACTION COYOTE SPRING/ MILFORD	ALT. 1 COYOTE SPRING/ BERYL	ALT. 2 COYOTE SPRING/ DELTA	ALT. 3 BERYL/ ELY	ALT. 4 BERYL/ COYOTE SPRING
	Subunits or Counties within OB Suitability Area						
46	Sevier Desert						
46A	Sevier Desert - Dry Lake[4]						
50	Milford[4]						
52	Lund District						
53	Beryl-Enterprise						
179	Steptoe						
210	Coyote Spring						
219	Muddy River Springs						
	Curry, NM[4]						
	Hartley, TX[4]						
	Other Affected Subunits or Counties						
169B	Tikaboo						
206	Kane Spring						
216	Garnet						
217	Hidden Valley						
218	California Wash						
	Overall Alternative Impact						

3905-2

1,2

No impact. (No animals present for Abundance Index.)

Moderate impact. (Less than 150 present for Abundance Index.)

High (significant) impact. (More than 150 present for Abundance Index.)

[3] Potential for impact was determined using the abundance of bighorn sheep and an indirect effect index developed by a model further described in ETA-30.

[4] Conceptual location of Area Support Centers (ASCs).

Table 4.3.1.8-1. Potential impact to bighorn sheep in Nevada/Utah DDA for the Proposed Action and Alternatives 1-6.

HYDROLOGIC SUBUNIT NO.	HYDROLOGIC SUBUNIT NAME	ABUNDANCE INDEX[1]	SHORT-TERM IMPACTS[2,3]	LONG-TERM IMPACTS[2,3]
	Subunits with M-X Clusters and DTN			
4	Snake			
5	Pine			
6	White			
7	Fish Springs			
8	Dugway			
9	Government Creek			
46	Sevier Desert			
46A	Sevier Desert-Dry Lake[4]			
54	Wah Wah			
137A	Big Smoky-Tonopah Flat			
139	Kobeh			
140A	Monitor—Northern			
140B	Monitor—Southern			
141	Ralston			
142	Alkali Spring			
148	Cactus Flat			
149	Stone Cabin[4]			
151	Antelope			
154	Newark[4]			
155A	Little Smoky—Northern			
155C	Little Smoky—Southern			
156	Hot Creek			
170	Penoyer			
171	Coal			
172	Garden			
173A	Railroad—Southern			
173B	Railroad—Northern			
174	Jakes			
175	Long			
178B	Butte—South			
179	Steptoe			
180	Cave			
181	Dry Lake[4]			
182	Delamar			
183	Lake			
184	Spring			
196	Hamlin			
202	Patterson			
207	White River[4]			
208	Pahroc			
209	Pahranagat			
	Overall DDA Impact			

3904-2

[1,2]

No impact. (No animals present for Abundance Index.)

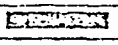
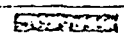
Moderate impact. (Less than 150 present for Abundance Index.)

High (significant) impact. (More than 150 present for Abundance Index.)

[3]Potential for impact was determined using the abundance of bighorn sheep and presence of a construction camp within 25 mi (40 km) of bighorn habitat.

[4]Conceptual location of Area Support Centers (ASCs).

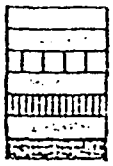
Table 4.3.1.9-1. Potential impact to desert tortoises in Nevada and Utah within 70 mi of the proposed operating base at Coyote Spring.[1]

HYDROLOGIC SUBUNIT NO.	HYDROLOGIC SUBUNIT NAME	ABUNDANCE INDEX[2]	POTENTIAL INDIRECT IMPACT[3]
Subunits Containing Base Suitability Area			
210	Coyote Spring		
219	Muddy River		
Other Affected Subunits			
161	Indian Spring		
169B	Tikaboo—South		
205	Meadow Valley Wash		
206	Kane Spring		
209	Pahranagat Valley		
211	Three Lake		
212	Las Vegas		
215	Black Mountains		
216	Garnet		
217	Hidden Valley—North		
218	California Wash		
219	Muddy River		
220	Lower Moapa		
221	Tule Desert		
222	Virgin River		
223	Gold Butte		
Overall Impact[4]			

3852-2

[1]NOTE: Desert tortoises would not be impacted in any other OB location. Also, construction of a DDA in Nevada/Utah or Texas/New Mexico would not impact the desert tortoise.

[2]



No impact. (No abundance.)

Low impact. (Low abundance.)

Moderate impact. (Moderate abundance.)

High impact. (High abundance.)

[3]Significance of impact was estimated for each hydrologic subunit by comparing the abundance index, indirect effect index (see ETR-30), and road access from the OB site. The nearness of a hydrologic subunit to Las Vegas was also considered, because recreational activities from Las Vegas may already be heavily impacting the desert tortoise. The presence of an OB at Coyote Spring Valley would not significantly add to the impacts from Las Vegas in certain subunits.

[4]The overall impact was judged significant because approximately 45 percent of the affected hydrologic subunits would be significantly impacted, and the desert tortoise is protected by Nevada and Utah state law as a threatened species and is under review for Federal protection under the Endangered Species Act.

Table 4.3.1.9-2. Potential impact to the Utah prairie dog around operating bases (OBs) for the Proposed Action and Alternatives 1-8 (page 1 of 2).

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	SHORT- AND LONG-TERM IMPACT[1]				
			PROPOSED ACTION	ALT. 1	ALT. 2	ALT. 3	ALT. 4
NO.	NAME		COYOTE SPRING/ MILFORD	COYOTE SPRING/ BERYL	COYOTE SPRING/ DELTA	BERYL/ ELY	BERYL/ COYOTE SPRING
	Subunits or Counties within OB Suitability Area						
46	Sevier Desert						
46A	Sevier Desert & Dry Lake[2]						
50	Milford[2]						
52	Lund District						
53	Beryl-Enterprise						
179	Steptoe						
210	Coyote Spring						
219	Muddy River Springs						
	Curry, NM						
	Hartley, TX[2]						
	Other Affected Subunits or Counties						
5	Pine						
49	Parowan						
51	Cedar City						
	Overall Alternative Impact						

3921-3

No impact. (Prairie dogs are not present for Abundance Index.)

Low impact.

Moderate impact.

High impact. (Prairie dogs are present for Abundance Index.)

[2]Conceptual location of Area Support Centers (ASCs).

Table 4.3.1.9-2. Potential impact to the Utah prairie dog around operating bases (OBs) for the Proposed Action and Alternatives 1-8 (page 2 of 2).

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	SHORT- AND LONG-TERM IMPACT[1]			
			ALT. 5	ALT. 6	ALT. 7	ALT. 8
NO.	NAME		MILFORD/ ELY	MILFORD/ COYOTE SPRING	CLOVIS/ DALHART	COYOTE SPRING/ CLOVIS
	Subunits or Counties within OB Suitability Area					
46	Sevier Desert					
46A	Sevier Desert & Dry Lake[2]					
50	Milford[2]					
52	Lund District					
53	Beryl-Enterprise					
179	Steptoe					
210	Coyote Spring					
219	Muddy River Springs					
	Curry, NM					
	Hartley, TX[2]					
	Other Affected Subunits or Counties					
5	Pine					
49	Parowan					
51	Cedar City					
	Overall Alternative Impact					

3921-3

[1]
- No impact. (Prairie dogs are not present for Abundance Index.)
- Low impact.
- Moderate impact.
- High impact. (Prairie dogs are present for Abundance Index.)

[2]Conceptual location of Area Support Centers (ASCs).

Table 4.3.2.12-5. Potential direct impact to grazing as a result of M-X DDA construction in Nevada/Utah for Proposed Action and Alternatives 1-6.

HYDROLOGIC SUBUNIT AREA		AUM CONCENTRATION IN AREA[1]	SHORT-TERM AND LONG-TERM EFFECTS		
NO.	NAME		ESTIMATED AUM LOSS	LOSS AS % OF TOTAL AUMS IN AREA	POTENTIAL IMPACT[1]
	Subunits with M-X Clusters and DTN				
4	Snake		636	0.2	
5	Pine		225	0.9	
6	White		215	0.8	
7	Fish Springs		78	0.6	
8	Dugway		111	1.1	
9	Government Creek		23	0.2	
46	Sevier Desert		277	0.3	
46A	Sevier Desert-Dry Lake[2]		404	1.4	
54	Wah Wah		329	1.5	
137A	Big Smoky-Tonopah Flat		87	0.4	
139	Kobeh		335	1.0	
140A	Monitor—Northern		216	2.5	
140B	Monitor—Southern		18	0.2	
141	Ralston		262	1.5	
142	Alkali Spring		44	1.7	
148	Cactus Flat		10	0.4	
149	Stone Cabin[2]		132	0.8	
151	Antelope		226	1.9	
154	Newark[2]		175	0.5	
155A	Little Smoky—Northern		139	1.0	
155C	Little Smoky—Southern		105	0.6	
156	Hot Creek		202	0.7	
170	Penoyer		108	1.1	
171	Coal		179	1.2	
172	Garden		128	1.5	
173A	Railroad—Southern		162	1.2	
173B	Railroad—Northern		271	0.6	
174	Jakes[2]		334	2.0	
175	Long		186	0.3	
175B	Butte—South		208	0.7	
179	Steptoe		19	0.1	
180	Cave		140	1.0	
181	Dry Lake[2]		397	1.3	
182	Delamar		82	0.8	
183	Lake		142	0.9	
184	Spring		128	0.2	
196	Hamlin		250	0.9	
202	Patterson		20	0.2	
207	White River		250	0.5	
208	Pahroc		11	0.1	
209	Pahranagat		23	0.1	
	Overall DDA Impact		7,187	0.7	

3833-3

No AUM reduction (No AUM concentration).

Low - Moderately Low Impact (Low AUM Concentration). Projected AUM reductions representing less than 1 percent of AUMs in the hydrologic subunit or totalling less than 200 AUMs.

Moderate - Moderately High Impact (Moderate AUM Concentrations). Projected AUM reductions representing 1-5 percent of AUMs in the hydrologic subunit or totalling 200-500 AUMs.

High Impact (High AUM Concentrations). Projected AUM reductions representing 5 percent or more of those in the hydrologic subunit or totalling 500 or more AUMs.

[2]Conceptual location of Area Support Center (ASC).

RANGE MANAGEMENT

- REMOVAL OF FORAGE AND FORAGING AREAS
- DISRUPTION OF OPERATOR ACCESS TO THE RANGE AND TO LIVESTOCK MOVEMENTS
- POTENTIAL IMPACTS ON WELLS, SPRINGS, AND OTHER WATER SOURCES
- INTRODUCTION OF TOXIC PLANTS INTO PROJECT DISTURBED AREAS
- POTENTIAL IMPACTS ON FACILITIES AND RANGE IMPROVEMENTS
- INCREASED COSTS OF LABOR
- INCREASED COSTS AND REDUCED SUPPLIES OF MATERIALS NEEDED FOR MAINTENANCE AND REPAIR OF FACILITIES REQUIRED BY LIVESTOCK OPERATIONS
- INCREASED COSTS AND POSSIBLY REDUCED SUPPLIES OF SUPPLEMENTAL FEEDS REQUIRED BY LIVESTOCK, PARTICULARLY DURING SEASONS OF LIMITED OR UNAVAILABLE RANGE FORAGE
- INCREASED DAMAGE TO FACILITIES AND RANGE IMPROVEMENTS SUPPORTING THE LIVESTOCK INDUSTRY THAT RESULT FROM INCREASED POPULATION PRESSURES AND VANDALISM

RANGE MANAGEMENT (Page 2 of 2)

- POTENTIALLY DECREASED PROPERTY VALUES
- DEVELOPMENT OF MULTI-FACETED ECONOMIC STRUCTURE IN PLACE OF RANCH AND MINING DOMINATED ECONOMY

Table 4.3.1.6-1. Potential direct impact to pronghorn in Nevada/Utah DDA for the Proposed Action and Alternatives 1-6.

HYDROLOGIC SUBUNIT NO.	HYDROLOGIC SUBUNIT NAME	ABUNDANCE INDEX[1]	SHORT-TERM EFFECTS % HABITAT LOSS[2] RANGE	SHORT-TERM EFFECTS % HABITAT LOSS[2] KEY	SHORT-TERM EFFECTS OVERALL IMPACT[3]	LONG-TERM EFFECTS % HABITAT LOSS RANGE	LONG-TERM EFFECTS % HABITAT LOSS KEY	LONG-TERM EFFECTS OVERALL IMPACT[3]
	Subunits with M-X Clusters and DTN							
4	Snake		35	45		1	1	
5	Pine		25	65		1	2	
6	White		20	90		0	2	
7	Fish Springs		85	15		1	1	
8	Dugway		10	55		0	1	
9	Government Creek		25	30		1	1	
[illegible]	Sevier Desert		16	50		1	2	
[illegible]A	Sevier Desert-Dry Lake[5]		35	25		1	1	
54	Wah Wah		95	50		2	1	
137A	Big Smoky-Tonopah Flat		0	0		0	0	
139	Kobeh		55	0		1	0	
140A	Monitor—Northern		0	0		0	0	
140B	Monitor—Southern		0	0		0	0	
141	Ralston		80	35		2	2	
142	Alkali Spring		0	0		0	0	
148	Cactus Flat		6	0		0	0	
149	Stone Cabin[5]		55	30		1	1	
151	Antelope		75	0		5	0	
154	Newark[5]		0	0		0	0	
155A	Little Smoky—Northern		0	0		0	0	
155C	Little Smoky—Southern		65	0		2	0	
156	Hot Creek		65	95		2	1	
170	Penoyer		0	0		0	0	
171	Coal		0	0		0	0	
172	Garden		0	0		0	0	
173A	Railroad—Southern		72	75		2	2	
173B	Railroad—Northern		45	60		1	1	
174	Jakes		0	0		0	0	
175	Long		0	0		0	0	
176B	Butte—South		0	0		0	0	
179	Steptoe		0	0		0	0	
180	Cave		0	0		0	0	
181	Dry Lake[5]		0	0		0	0	
182	Delamar		0	0		0	0	
183	Lake		85	85		1	1	
184	Spring		2	10		1	1	
196	Hamlin		40	80		1	2	
202	Patterson		80	45		1	1	
[illegible]7	White River[5]		0	0		0	0	
[illegible]8	Pahroc		0	0		0	0	
203	Pahranagat		0	0		0	0	
	Overall DDA Impact		40	45		1	1	

1,3,4

3826-3

No impact. (No range or key habitat present for Abundance Index.)

Moderate impact. (Range present for Abundance Index.)

High (significant) impact. (Key habitat present for Abundance Index.)

[2]Habitat loss during construction, including a 1 mile (1.6 km) avoidance effect zone around all construction activities.

[3]Loss of any key habitat or more than 50 percent of range in hydrologic subunit is considered significant. Loss of 26-50 percent range is considered moderate and loss of under 26 percent of range in a hydrologic subunit is considered insignificant.

Table 4.3.1.6-2. Potential overall impact to pronghorn resulting from construction and operation of M-X operating bases for the Proposed Action and Alternatives 1-8 (page 1 of 2).

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE[1] INDEX	ESTIMATED OVERALL IMPACT[1]				
NO.	NAME		PROPOSED ACTION COYOTE SPRING/ MILFORD	ALT. 1 COYOTE SPRING/ BERYL	ALT. 2 COYOTE SPRING/ DELTA	ALT. 3 BERYL/ ELY	ALT. 4 BERYL/ COYOTE SPRING
	Subunits or Counties within OB Suitability Area						
46	Sevier Desert						
46A	Sevier Desert-Dry Lake[2]						
50	Milford						
52	Lund District						
53	Beryl-Enterprise						
179	Steptoe						
210	Coyote Springs						
219	Muddy River Springs						
	Curry, NM[3]						
	Hartley, TX[3]						
	Other Affected Subunits or Counties						
4	Snake						
5	Pine						
6	White						
7	Fish Springs						
8	Dugway						
9	Government Creek						
46A	Sevier Desert-Dry Lake[2]						
49	Parowan						
50	Milford[2]						
51	Cedar Spring						
53	Beryl-Enterprise						
54	Wah Wah						
155	Little Smoky N & S						
183	Lake						
184	Spring						
185	Tippet						
196	Hamlin						
202	Patterson						
	Overall Alternative Impact						

3827-2

No impact. (No range or key habitat present for Abundance Index.)

Moderate impact. (Range present for Abundance Index.)

High (significant) impact. (Key habitat present for Abundance Index.)

[2]Conceptual location of Area Support Centers (ASCs) for the Proposed Action and Alternatives 1-6.

[3]Conceptual location of Area Support Centers (ASCs) for Alternative 7.

Table 4.3.1.6-2. Potential overall impact to pronghorn resulting from construction and operation of M-X operating bases for the Proposed Action and Alternatives 1-8 (page 2 of 2).

HYDROLOGIC SUBUNIT OR COUNTY NO.	HYDROLOGIC SUBUNIT OR COUNTY NAME	ABUNDANCE[1] INDEX	ESTIMATED OVERALL IMPACT[1] ALT. 5 MILFORD/ ELY	ALT. 6 MILFORD/ COYOTE SPRING	ALT. 7 CLOVIS/ DALHART	ALT. 8 COYOTE SPRING/ CLOVIS
	Subunits or Counties within OB Suitability Area					
46	Sevier Desert					
46A	Sevier Desert-Dry Lake[2]					
50	Milford[2]					
52	Lund District					
53	Beryl-Enterprise					
179	Steptoe					
210	Coyote Springs					
219	Muddy River Springs					
	Curry, NM[3]					
	Hartley, TX[3]					
	Other Affected Subunits or Counties					
4	Snake					
5	Pine					
6	White					
7	Fish Springs					
8	Dugway					
9	Government Creek					
46A	Sevier Desert-Dry Lake[2]					
49	Parowan					
50	Milford[2]					
51	Cedar Spring					
53	Beryl-Enterprise					
54	Wah Wah					
155	Little Smoky N & S					
183	Lake					
184	Spring					
185	Tippet					
195	Hamlin					
202	Patterson					
	Overall Alternative Impact					

3827-2

[1] No impact. (No range or key habitat present for Abundance Index.0

Moderate impact. (Range present for Abundance Index.)

High (significant) impact. (Key habitat present for Abundance Index.)

[2] Conceptual location of Area Support Centers (ASCs) for the Proposed Action and Alternatives 1-6.

[3] Conceptual location of Area Support Centers (ASCs) for Alternative 7.

UNIT WATER REQUIREMENTS FOR CONSTRUCTION BY CONSTRUCTION ACTIVITY. (PAGE 2 of 3)

UNIT	UNIT QUANTITY/ SHELTER OR MILE PROTECTIVE STRUCTURE (a)	MPQ[1]	
		GALLONS/UNIT QUANTITY (b)	ACRE-FT/PROTECTIVE STRUCTURE OR MILE (c)
New DTN			
Aggregate Facilities	7,720 CY	150	3.55
Clear and Grub	7.8 AC	2,420	0.058
Scarify and Recompact	20,000 SY	32	1.98
Aggregate Base Compaction	5,460 CY	45	0.76
Embankment Compaction	15,000 CY	48	2.21
Fine Grading	12.4 AC	2,400	0.091
Dust Control	4.2 AC	112,000	1.44
Irrigation	6.0 AC	326,000	6.0

2513-2

[1]Most probable quantity.

Note: $(c) = (a) \times (b) \times \frac{\text{Acre-ft}}{325{,}900 \text{ gal.}}$

UNIT WATER REQUIREMENTS FOR CONSTRUCTION BY CONSTRUCTION ACTIVITY. (PAGE 3 of 3)

UNIT	UNIT QUANTITY/ SHELTER OR MILE PROTECTIVE STRUCTURE (a)	MPQ[1]	
		GALLONS/UNIT QUANTITY (b)	ACRE-FT/PROTECTIVE STRUCTURE OR MILE (c)
Cluster Roads			
Aggregate	6,120 CY	150	2.80
Clear and Grub	8.1 AC	2,420	0.06
Scarify and Recompact	21,700 SY	32	2.14
Aggregate Base Compaction	6,120 CY	45	0.85
Embankment Compaction	7,000 CY	48	1.04
Fine Grading	13.5 AC	2,400	0.10
Dust Control	4.5 AC	57,000	0.79
Irrigation	6.0 AC	326,000	6.0
Construction Personnel		85 gal. per capita per working day	

2513-2

[1]Most probable quantity:

(c) = (a) x (b) x $\frac{\text{acre-ft}}{\text{gal}}$

UNIT WATER REQUIREMENTS FOR CONSTRUCTION BY CONSTRUCTION ACTIVITY. (PAGE 1 of 3)

UNIT	UNIT QUANTITY/ SHELTER OR MILE PROTECTIVE STRUCTURE (a)	MPQ[1]	
		GALLONS/UNIT QUANTITY (b)	ACRE-FT/PROTECTIVE STRUCTURE OR MILE (c)
Protective Structures			
Aggregate Facilities	506 CY	150	0.24
Concrete	624 CY	40	0.077
Concrete Plants	624 CY	20	0.038
Subgrade Compaction	500 CY	48	0.074
Backfill Compaction	17,840 CY	48	2.64
Slope Stabilization	3,640 SY	.25	0.0028
Dust Control	1.9 AC	48,400	0.28
Irrigation	7.5 AC	326,000	7.5

2513-2

[1]Most probable quantity.

Note: (c) = (a) x (b) x $\frac{\text{Acre/Ft}}{325,900 \text{ gal}}$.

WILDLIFE

- LOSS OF HABITAT TO M-X FACILITIES (160,000 ACRES OR DIRECT LOSS)
- POTENTIAL LOSS OF WATER RESOURCES (EFFECT ON HABITAT)
- LOSS OF HABITAT DUE TO BEHAVIORAL AVOIDANCE
- INCREASED HUMAN ACTIVITY IN PREVIOUSLY REMOTE WILDLANDS
  - ORV USE
  - CAMPING AND HIKING (HUMAN PRESENCE, NOISE, LITTER)
  - POACHING
  - INCREASED HUNTING DEMAND
  - HARASSMENT/VANDALISM OF WILDLIFE
  - COLLECTION (ESPECIALLY DESERT TORTOISE)
  - INCREASED ROAD KILLS
  - BLOCKING OF MIGRATION ROUTES THROUGH AVOIDANCE OF TRAFFIC

Table 4.3.1.6-3. Potential impact to pronghorn resulting from construction and operation of M-X DDA for Alternative 7.

COUNTY	ABUNDANCE INDEX[1]	SHORT-TERM		LONG-TERM	
		% RANGE LOSS	ESTIMATED OVERALL IMPACT[3]	% RANGE LOSS	ESTIMATED OVERALL IMPACT
Counties with M-X Clusters and DTN					
Bailey, TX		0		0	
Castro, TX		0		0	
Cochran, TX		6		1	
Dallam, TX		25		3	
Deaf Smith, TX[2]		20		6	
Hartley, TX[2]		15		2	
Hockley, TX		0		0	
Lamb, TX		0		0	
Oldham, TX		4		1	
Parmer, TX		0		0	
Randall, TX		0		0	
Sherman, TX		0		0	
Swisher, TX		0		0	
Chaves, NM		7		1	
Curry, NM[2]		20		7	
DeBaca, NM		4		1	
Guadalupe, NM		0		0	
Harding, NM		15		1	
Lea, NM		0		0	
Quay, NM		9		1	
Roosevelt, NM[2]		25		2	
Union, NM		9		1	
Overall Alternative Impact		10		1	

3829-2

[1] No impact. (No range or key habitat present for Abundance Index.)
Moderate impact. (Range present for Abundance Index.)
High (significant) impact. (Key habitat present for Abundance Index.)

[2] Conceptual location of Area Support Center (ASC).

[3] Loss of any key habitat or more than 50 percent of range in county is considered significant (High impact). Loss of 26-50 percent range in a county is considered moderate, and loss of 25 percent or less of range in a county is considered insignificant (No impact).

Table 4.3.1.6-4. Potential impact to pronghorn in Nevada/ Utah and Texas/New Mexico DDAs for Alternative 8.

HYDROLOGIC SUBUNIT OR COUNTY		ABUNDANCE INDEX[1]	SHORT-TERM EFFECTS			LONG-TERM EFFECTS		
			% HABITAT LOSS[4]		ESTIMATED OVERALL IMPACT[3]	% HABITAT LOSS		ESTIMATED OVERAL IMPACT[3]
NO.	NAME		RANGE	KEY		RANGE	KEY	
	Subunits or Counties with M-X Clusters and DTN							
4	Snake[2]		10	15		1	1	
5	Pine		25	65		1	2	
6	White		0	10		0	1	
7	Fish Springs		0	4		0	1	
46	Sevier Desert		7	20		1	1	
46A	Sevier Desert - Dry Lake[2]		25	25		1	1	
54	Wah Wah		95	50		2	1	
155C	Little Smoky—Southern		4	0		1	0	
156	Hot Creek		60	95		2	1	
170	Penoyer		0	0		0	0	
171	Coal		0	0		0	0	
172	Garden		0	0		0	0	
173A	Railroad—Southern		60	55		1	1	
173B	Railroad—Northern		10	25		1	1	
180	Cave		0	0		0	0	
181	Dry Lake[2]		0	0		0	0	
182	Delamar		0	0		0	0	
183	Lake		60	85		1	1	
184	Spring		2	10		1	1	
196	Hamlin		40	80		1	2	
202	Patterson		80	45		1	1	
207	White River		0	0		0	0	
208	Pahroc		0	0		0	0	
209	Pahranagat		0	0		0	0	
	Bailey, TX		0	0		0	0	
	Cochran, TX		4	0		1	0	
	Dallam, TX		20	0		2	0	
	Deaf Smith, TX		20	0		6	0	
	Hartley, TX[2]		15	0		2	0	
	Hockley, TX		0	0		0	0	
	Lamb, TX		0	0		0	0	
	Oldham, TX		4	0		1	0	
	Parmer, TX		0	0		0	0	
	Chaves, NM		7	0		1	0	
	Curry, NM		20	0		7	0	
	DeBaca, NM		3	0		1	0	
	Guadalupe, NM		0	0		0	0	
	Harding, NM		15	0		1	0	
	Lea, NM		0	0		0	0	
	Quay, NM		9	0		1	0	
	Roosevelt, NM[2]		25	0		2	0	
	Union, NM		9	0		1	0	
	Overall Nevada/Utah		15	21		1	1	
	Overall Texas/New Mexico		10	0		1	0	
	Overall Alternative 8							

3829-1

No impact. (No range or key habitat present for Abundance Index.)

Moderate impact. (Range present for Abundance Index.)

High (significant) impact. (Key habitat present for Abundance Index.)

[2]Conceptual location of Area Support Center (ASC).

[3]Loss of any key habitat or more than 50 percent of range in hydrologic subunit or county is considered significant. Loss of 26-50 percent range is considered moderate, and loss of under 26 percent of range in a hydrologic subunit or county is considered insignificant. Any key habitat loss remaining after construction could cause a moderate impact.

[4]Habitat loss during construction. This includes a 1 mile (1.6 km) avoidance zone around all construction activities.

MX construction water requirements by hydrologic subunit for the DDA in Nevada/Utah (sheet 1 of 3).

AREA NO.	HYDROGRAPHIC AREA	PEAK YEAR		TOTAL PROJECT	
		RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT	RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT
4	Snake	2.8-5.0	3.2	5.1-11	7.7
5	Pine	2.4-3.3	2.5	3.8-6.0	4.7
6	Tule	2.2-3.5	2.4	4.0-6.9	5.0
7	Fish Springs Flat	0.3-1.0	0.4	0.6-1.8	1.1
8	Dugway	0.3-1.0	0.4	0.6-1.8	1.1
9	Government Creek	0.1-0.3	0.2	0.8-1.2	1.0
46	Sevier Desert	2.4-5.8	4.0	4.5-12	6.6
46A	Sevier Desert-Dry Lake	2.1-3.0	2.4	2.4-4.4	3.3
54	Wah Wah	2.6-4.4	3.0	4.0-7.2	5.4
137A	Big Smoky	0.6-1.8	0.9	1.0-3.0	1.9
139	Kobeh	2.7-4.1	2.8	4.0-6.9	5.2
140A	Monitor	0.7-3.8	0.8	1.1-6.0	2.2
141	Ralston	3.8-6.0	4.5	5.1-8.8	6.7
142	Alkali Spring	0.6-1.8	1.0	1.0-2.9	1.8
149	Stone Cabin	2.4-4.0	2.6	3.01-5.5	4.0
151	Antelope	2.3-3.9	2.7	3.9-5.7	14.3

2465

[1]MPQ - Most Probable Quantity.

[2]Indicates an additional construction camp is possible if proposed construction camp location is not acceptable.

MX construction water requirements by hydrologic subunit for the DDA in Nevada/Utah (sheet 2 of 3).

AREA NO.	HYDROGRAPHIC AREA	PEAK YEAR		TOTAL PROJECT	
		RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT	RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT
154	Newark	1.6-2.6	1.9	2.7-5.3	3.7
155A	Little Smoky, N	0.5-3.1	0.8	0.8-4.5	1.5
155C	Little Smoky, S	1.4-2.2	1.8	2.1-3.3	2.7
156	Hot Creek	0.8-3.4	1.3	1.4-5.8	2.6
170	Penoyer	0.7-3.9	0.9	1.1-6.3	2.2
171	Coal	1.8-3.0	2.7	4.7-6.4	3.3
172	Garden	0.6-3.0	1.4	1.0-6.4	1.9
173A	Railroad, S	2.5-3.6	2.7	3.9-6.0	4.8
173B	Railroad, N	2.0-3.9	2.6	2.6-6.0	3.6
174	Jakes	0.5-1.5	0.7	0.8-2.5	1.5
175	Long	1.6-2.1	1.6	2.6-3.9	3.1
178B	Butte, S	0.6-1.8	0.9	1.0-3.0	1.9
180	Cave	0.6-1.6	1.0	0.6-1.7	1.1
181	Dry Lake	1.9-2.7	2.2	5.3-9.0	6.8
182	Delamar	0.4-2.7	0.6	0.6-3.0	1.1
183	Lake	2.1-3.5	2.7	2.5-4.4	3.3

2465

[1]MPQ - Most Probable Quantity.

[2]Indicates an additional construction camp is possible if proposed construction camp location is not acceptable

MX construction water requirements by hydrologic subunit for the DDA in Nevada/Utah (sheet 3 of 3).

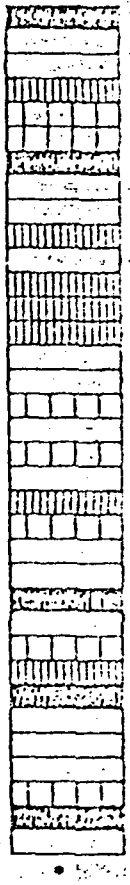
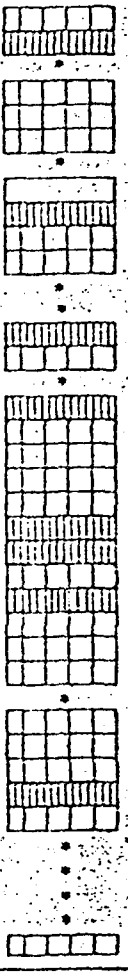
AREA NO.	HYDROGRAPHIC AREA	PEAK YEAR		TOTAL PROJECT	
		RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT	RANGE X 10^3 ACRE-FT	MPQ[1] X 10^3 ACRE-FT
184	Spring	0.4-2.5	0.7	0.4-2.7	0.8
196	Hamlin	0.6-3.6	0.7	1.2-6.3	2.2
202	Patterson	0.2-0.6	0.3	0.2-0.5	0.3
207	White River	0.8-2.5	2.0	1.8-4.0	2.6
208	Pahroc	0.1-0.2	0.1	0.1-0.2	0.1
209	Pahranagat	0.2-0.7	0.4	0.2-0.7	0.4

2465

[1]MPQ - Most Probable Quantity.
[2]Indicates an additional construction camp is possible if proposed construction camp location is not acceptable.

4092-A

Potential for impact to groundwater availability in Nevada/Utah DDA for the Proposed Action and Alternatives 1-6.

HYDROLOGIC SUBUNIT NO.	NAME	GROUNDWATER AVAILABILITY[1]	SHORT-TERM IMPACT[3]	LONG-TERM IMPACT[3]
	Subunits with M-X Cluster and DTN			
4	Snake			
5	Pine			
6	White			
7	Fish Springs			
8	Dugway			
9	Government Creek			
46	Sevier Desert			
46A	Sevier Desert & Dry Lake[2]			
54	Wah Wah			
137A	Big Smoky-Tonopah Flat			
139	Kobeh			
140A	Monitor—Northern			
140B	Monitor—Southern			
141	Ralston			
142	Alkali Spring			
148	Cactus Flat			
149	Stone Cabin[2]			
151	Antelope			
154	Newark[2]			
155AC	Little Smoky—N&S			
156	Hot Creek			
170	Penoyer			
171	Coal			
172	Garden			
173AB	Railroad—N&S			
174	Jakes			
175	Long			
178B	Butte—South			
179	Steptoe			
180	Cave			
181	Dry Lake[2]			
182	Delamar			
183	Lake			
184	Spring			
196	Hamlin			
202	Patterson			
207	White River[2]			
208	Pahroc			
209	Pahranagat			
	Overall DDA			

[1]Ground-Water Availability based on plate 1-I, US&S Professional Paper 813-G (Eakin, Price and Harrill, 1976.)

3926-3

*Data not available.

No impact. (Low availability.)

Low potential for impact. (Moderately low availability)

Moderate potential for impact. (Moderate availability)

High potential for impact. (High availability)

[2]Conceptual location of Area Support Centers (ASCs).

[3]Methodology for impact assessment presented in Section 4.1.2.3.

Potential for impact to groundwater availability in the operating base areas for the Proposed Action and Alternatives 1-8.

HYDROLOGIC SUBUNIT OR COUNTY	GROUNDWATER AVAILABILITY	SHORT-TERM IMPACT	LONG-TERM IMPACT
Beryl, UT (Alternatives 1,3,4)	*		
Coyote Spring Valley, NV (P.A. and Alternatives 1,2,4,6,8)			
Delta, UT (Alternative 2)			
Ely, NV (Alternatives 3,5)			
Milford, UT (P.A. and Alternatives 5,6)			
Clovis, NM (Alternatives 7,8)	*		
Dalhart, TX (Alternative 7)	*		

3927-1

*Data not available.

No impact. (Low availability)

Low impact. (Moderately low availability)

Moderate impact. (Moderate availability)

High impact. (High availability)

ATTACHMENT 5

Comment Letters on BCP Deliverables

UTAH MX COORDINATION OFFICE

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

May 12, 1981

Wayne Snowbarger
Captain, USAF
AFRCE-MX/DEVC
Norton Air Force Base, California 92409

Dear Captain Snowbarger:

We appreciate the opportunity to review Deliverables 24, 8 (for Beryl and Milford) and 5. Due to the compressed timetable, a thorough analysis was not possible. Nevertheless, we feel that our comments encompass most of the major deficiencies in the deliverables. Additional detailed comments from the private sector will be forwarded as received.

General Comments on Deliverable 24: Work Plan

This is our second review of Deliverables 24 (see our letter of April 2, 1981). In general, most of the concerns previously enumerated have not been incorporated adequately, or in some instances at all, in the Work Plan. Again, we must reiterate that the Work Plan does not properly address the dynamic interrelationship of a military base with the surrounding human environment, either as an insulated (closed) community or as it (realistically) relates to the surrounding communities. For the most part, we find that comments I, II, IV, and V (pages 1 to 3 of our April 2, 1981 letter) have not been included, or are inadequately treated in the Work Plan.

Specific Comments on Deliverable 24: Work Plan

Chapter	Page	Para.	Comments
24.2.1	2	1	Although Quality of Life is a key goal of the Base Comprehensive Plan, the term "high" is not defined. For that matter, none of the five major goals are adequately defined, nor are the methods of their enumerated evaluation clearly specified.
Figure 2			The goals include a sixth goal of Air Forst Cost and Funding that has not

Chapter	Page	Para.	Comments
			been discussed in the text. Furthermore, the terms and phrases listed below the goals are incomplete, vague and indefined. For example, under Quality of Life, economics is not considered a component; environmental sensitivity which is, is a meaningless phrase.
24.2.2			In principle, the goal assessment and evaluation process outlined seems reasonable. However, given the almost total lack of uniformly distributed in-depth data for the areas under consideration, the "process" amounts to nothing more than professional judgements. Making these judgements would be difficult for the most knowledgeable state and local professionals. It would be more so for the Air Force and/or their contractors. The incomplete data and lack of directly relevant experience with the areas under study could result in poor siting decisions. The Air Force and its contractors should be forthright and indicate that, in general, areas will be selected on the basis of unsubstantiated personal preference and drop the pretense of rational selection.
24.2.5	5	1	Several of the key aspects are so vague and generalized as to be meaningless. For example, Maximum Use of Prior Work, Concurrent On-Base/Off-Base Planning, etc., are not adequately described.
Figure 2			It is neither acceptable nor appropriate to consolidate the assessment/evaluation of natural resources and human resources (see our letter of April 2, 1981). Since the base will foster working and social relationships, it is incomprehensible that such little attention is being given to the human resource category.
24.4.8	128		It should be noted that the Utah Congressional Delegation consists of: Senator

Chapter	Page	Para.	Comments
			Orrin Hatch, Senator Jake Garn, Representative Dan Marriott and Representative James Hansen.
24.5			The intergration/interrelationship of the human environment and the base is not addressed in the Work Plan. There will be a natural resources plan, an environmental quality plan, a communities plan, etc., but there is no plan for preserving/enhancing the economic-social-cultural-psychological elements of the base and the region. There is no deliverable that will evaluate, assess, note or otherwise cursorily mention the human environment. Much data are to be gathered, analyzed and evaluated by planners, architects, engineers, etc., all in isolation from the region in which the base will be located. This serious omission is evidence of a lack of commitment to integrate the base into the region. The emphasis is on structures and not on people; it should be the other way around.

General Comments on Deliverable 8: Land Use Plans - Milford and Beryl

The almost total lack of substantive information contained in this Land Use Plan is appalling, notwithstanding the early due date of this deliverable. Furthermore, it is completely inappropriate and unsupportable to assign preferences to alternative base location sites at this time. There is a great danger (given not only the paucity of information contained in this deliverable, but also the general lack of site-specific information contained in the DEIS, Fugro documents, etc.) that a poor site will be selected. It is one thing to delineate alternative sites at this early stage; this would seem to be the logical course of action to follow. However, preferential assignment is not only premature but needlessly prejudicial.

The summary sheet (Assumptions Made and Confirmation Needed) is confusing. It should be in the back (not in the front) of the document, or detailed maps should be included.

The regional graphic is unnecessary and should be eliminated. The detailed graphics are generally unacceptable. The data tend to be inconsistent, obscure and/or incomplete from map to map. The figure titles are also obscure. Furthermore, it is not at all clear how to use the maps to assess the exclusion and evaluation factors.

Again, while it is recognized that this is an early deliverable, there is an uneven treatment of land ownership and land resource management issues. Furthermore, these factors are not discussed in regional context.

Two items are referenced in the deliverable that are not in our possession (i.e., Ertec sites and Deliverable 1). Until they are provided, it is not possible to evaluate these sections of the plan.

The population estimates as derived appear to be driven by different inputs and assumptions than seen elsewhere. The data sources, projection methodology and critical assumptions should be discussed in depth and the rationale for another set of population estimates should be provided.

The geologic stability of the areas under consideration needs to be examined in detail by those with the appropriate technical expertise before sites are comparatively evaluated. In addition, since mineral potential plays a key role in siting, where the potential is unknown, the drilling program option should be discussed; it is most appropriate for a base since development of a large tract of land will be precluded.

Specific Comments on Deliverable 8: Land Use Plan - Milford

Chapter	Page	Para.	Comments
Assumptions Made and Confirmation Needed		3	Reference is made to the water source being relocated to eliminate the bird strike hazard; indicate in more detail how this will be done and where it will be relocated.
8.1.1	1	4	Reference is made to the completed DEIS. In fact, this is only a Tier I DEIS. Many sections of this DEIS state that more detailed data will be included in subsequent tiers. Therefore, it is not now a complete document until all tiers are completed. The last sentence of this paragraph says that the DEIS is serving as a primary data base. Since much of the primary data were not included in the DEIS, it cannot serve as a primary data base; in addition, the DEIS has already been found by the State of Utah to be grossly deficient.
8.1.3	3	3	Economics is a component of Quality of Life. Furthermore, it is inconsistent to merely consider (not plan or provide for) social/psychological needs.

Chapter	Page	Para.	Comments
8.2.1	4	5	The technical team that did the site survey visited this particular site as well as other sites during March of 1981. These individuals could only have made a cursory analysis of the visual, cultural, and sociological impacts and aesthetic value of the property.
8.2.2.2	5	1	There is a reference to Utah trust lands comprising 10 percent of the area. There is no reference made of any attempt whatsoever to discuss the acquisition with the state or even assess whether the state is interested in giving up the land to the Air Force. Force. Earlier negotiations between the state and the Air Force should be discussed, describing the conditions under which that land would be made available to the Air Force.
8.2.2.3	5-6	1	Wildlife, wildlife habitat and wildlife-related recreation and hunting are additional major land uses that should be included in the discussion.
8.2.2.7	7		The discussion should include other forms of wildlife in the vicinity zone, such as: mourning dove, pheasant, cottontail rabbit, badger, kit fox, bobcat, raptors, small mammals, passerine birds, waterfowl, amphibians and reptiles. The feral horse should not be included in the same context as wildlife. Pronghorn antelope range includes all the vicinity zone, which is not the same for mule deer.
8.2.2.7	7	2	The text mentions eight springs, but only six are shown on Figure C. Additional wells that provide important wildlife water holes should be shown. Springs are stated to have exclusionary influence yet are shown on the evaluation factors map rather than on the exclusion factors map. This should be corrected.

Chapter	Page	Para.	Comments
3.2.2.7	7	3	Pronghorn antelope range occurs virtually all throughout the vicinity zone and includes key habitat south of the Shauntee Hills and east, south and southwest of Blue Mountain. This should be corrected and additional data should be included in the discussion.
8.2.3	8-11		The site selection process, and in particular the exclusion and evaluation factors, need to be discussed in greater detail. State and local participation in the development of factors, as well as their preferences for discretionary trade-offs, must be incorporated into the site selection process.
8.2.3 and Figure B	8	2	Shauntee Hills and Blue Mountain pronghorn antelope key habitat areas and all wildlife water holes are equally important and should be shown as exclusion factors in addition to sage grouse winter ground.
Figure C			Only six of the numerous wildlife water sources are shown. Other springs and wells that provide wildlife watering sites should be included. The pronghorn antelope distribution shown is incorrect. It is not the same as mule deer and feral horse range, and should not be included in the same context as the feral horse.
Figure D			Pronghorn antelope range includes all the area, not just the western edge or the northern boundary. This should be corrected. Range of numerous other forms of wildlife includes all or part of the area and should be included in the discussion for both southern and central Milford. Raptors and passerine birds ranges include all the area, not just Lund Flats, and should be included in the discussion for both southern and central

Chapter	Page	Para.	Comments
			Milford. Also, Lund Flat is not the sole perennial water source for birds; there are additional wells and springs.
			There are springs and/or wells within and near adjacent to the central site which should be shown. Numerous other springs and wells and Blue Mountain key pronghorn antelope habitat should be included for both southern and central Milford. The entire area provides important habitats for numerous other wildlife, such as: mourning dove, cottontail rabbit, raptors, passerine birds (horned lark), badger, kit fox, small mammals and reptiles. These should be included.
Figure E			The southern Milford site at the mouth of Fisher Wash would cause high significant direct impact on key pronghorn antelope habitat and other wildlife habitat and also cause high significant indirect impacts on transplanted colonies of the endangered Utah prairie dog, as well as to deer, elk and a variety of other wildlife. Addititional study is necessary to determine if the impacts on wildlife would be greater or less than the central Milford site.
			This shows that the proposed access road runs right between two high power lines for IPP. Three pages later in Figure G, it shows that the only access to the airfield and the complex will be a road running between high power lines for IPP. The obvious opportunities for disaster, not only to the MX base itself, but to the IPP transmission lines by having vehicular traffic routinely passing between the towers of the high power line would seem to be overwhelming.
Figure F			The central Milford site east of Blue Mountain would cause high significant direct impact on key pronghorn antelope

Chapter	Page	Para.	Comments
			habitat and other wildlife habitat, and also cause high significant indirect impacts on transplanted colonies of the endangered Utah prairie dog, as well as to deer, elk and a variety of other wildlife. Lamoreaux well (on the Jockey Road) and six additional wells would be directly impacted by an OB at the central Milford site. Additional study is necessary to determine if the impacts on wildlife would be greater or less than the preferred southern Milford OB site.
8.2.5	14		The meets and bound descriptions of the area should identify who owns the lands. At least for Township 31 South, Range 14 West, Sections 2, 16 and 36 are in the state inventory. There is no reference to the fact that the state owns them, nor is there any reference to the fact that all of these properties are under oil and gas lease, geothermal lease and metalliferous minerals leases. There is also an "unnoticed" lack of Section 26, which by logical boundary of such an outline would have to be included in the overall program. For Township 32 South, Range 14 West, there is no reference to the fact that there are adjacent properties of the state (notably Sections 3 and 10) which will be impacted by location of a base; there is again no reference as to what the impacts will be or what it means. The southern half of Section 1 is also completely under lease for oil and gas, geothermal and metalliferous minerals; there is no reference to this in the document. In Township 31 South, Range 13 West, neither section belongs to the state, but the adjacent Section 32 has both mineral and geothermal leases on it. The document should, as a minimum, make reference to the potential impacts, (negative or positive) that such a project might have on adjacent and peripheral lands.

Chapter	Page	Para.	Comments
8.3.2.2	19	1	The assumption that the number of life support employees living off the base is 4,000 (less if near an established community), suggests that the Air Force still does not have the faintest idea of what the real number is or whether these people will be near an established community. There is also a reference to an additional 10,800 persons that could be housed at or near the base in 1986, for a total population of 31,740. Again, the document does not deal with the accommodation of that many people. Certainly housing on-base for most of the military and the high-paid technical civilians will not result in a tax base adequate to support the impacts of the population.
8.3.2.2	19	3	Here, the worst case total is shown to be 43,000 people. This would be one of the largest communities in Utah, and certainly would be overwhelming to any of the counties in the region. It is obviously glossed over in the document.
8.3.4	23		The first three paragraphs and the subsequent three paragraphs of this page are the same text.

Specific Comments on Deliverable 8: Land Use Plan - Beryl

8.1.1	1	4	See comment on Deliverable 8: Land Use Plan - Milford: Chapter 8.1.1, page 1, paragraph 4.
8.2.1	4	5	See comment on Deliverable 8: Land Use Plan - Milford: Chapter 8.2.1, page 4, paragraph 5.
8.2.2.1	5	1	Indian Peak is a topograhic feature of the Needle Range, not the name of the mountain range. This should be corrected throughout this document.

Chapter	Page	Para.	Comments
8.2.2.3	6	1	Wildlife and related recreation and hunting are additional major land uses that should be included in the discussion.
8.2.2.7	8		There is no discussion of other forms of wildlife in the vicinity, such as: the endangered bald eagle, elk, bobcat, coyote, kit fox, badger, mourning dove, pheasant, cottontail rabbit, small mammals, passerine birds, waterfowl, amphibians and reptiles. The feral horse should not be included in the same context as wildlife.
8.2.2.7	8	2	The text mentions 19 springs, but only 14 are shown on Figure C. The feral horse should not be included in the same context as native wildlife species.
8.2.2.7	8	3	Include a discussion of key antelope habitat including and east of Table Butte, and the critically important year-round deer and elk winter range adjacent to the north part of the suitability area.
8.2.3	10	1	The feral horse should not be included in the same context as wildlife. Elk and numerous other forms of wildlife utilize the springs and should be included in the discussion.
Figure B			The Table Butte key antelope habitat area is as important as sage grouse wintering ground and should be included as an exclusion factor, since the latter is shown as an exclusion factor in Deliverable 8: Land Use Plan - Milford: Figure B. In addition, wildlife water holes are equally as important and should be included as exclusion factors rather than evaluation factors, as recommended for Deliverable 8: Land Use Plan - Milford: Figure B. The figure and the text should indi-

Chapter	Page	Para.	Comments
			cate the area is isolated from all state roads and only connected to them by low quality county roads.
Figure C			The pronghorn antelope distribution is grossly incorrect and is not the same as the mule deer or feral horse range. It should be changed to conform with maps provided earlier by UDWR to HDR.
8.2.3	11	4	The OB should be relocated to a lower elevation to protect important wildlife habitat with springs in the juniper-sagebrush ecotone.
8.2.3	12	6	Access road development may lead to the degradation of nonprivate state and federal lands, since the open country recreationists will be turned loose in areas that are not now generally accessed by them.
8.3.2.1	18	2	If life support and construction workers are interchangeable, the common construction label should be used so that the reader would understand what was being said.
Figure E, Figure F and Figure G			Because of the lower location, Alternative B appears to be the least damaging to wildlife. Additional studies are necessary to determine which of these alternatives would be least or most damaging to wildlife. Alternative C appears to be as damaging to wildlife as Alternative A.
Figure H			Elk and other wildlife should be included in the evaluation for Alternatives A, B and C. Feral horses should not be included in the same context as wildlife. Direct impacts on antelope and other wildlife should also be included for Alternative B.
8.3.2.1	18	4	This states that the term "civilian" has different meanings. Again, it

Chapter	Page	Para.	Comments
			would appear we are playing games with the semantics in order to mask what is really going on. Civilians employed by the installation may have additional privileges when compared with local residents. Specify those privileges. The term "government work force" is used to describe civil service and active military personnel. The term "contractor" means civilians only, not including civil service. This appears to be a redefinition of existing terminology so that the public using the same terms will be confused. The purpose of redefining is not at all clear.
8.3.2.2	20	2	See comment on Deliverable 8: Land Use Plan - Milford: Chapter 8.3.2.2, page 20, paragraph 2.

General Comments on Deliverable 5: Framework for Data Management

In general, the framework outlined, while sketchy, seems reasonable as a basis for organizing data related to Comprehensive Base Planning. However, one problem which has plagued the Utah MX Coordination Office and its state agencies has been the inability of any given Air Force contractor to recover and utilize data previously furnished to any other Air Force contractor. It will be the policy of the State of Utah not to furnish duplicate copies of data already supplied to the Air Force and its contractors under previous requests.

Specific Comments on Deliverable 5: Framework for Data Management

5.3	4	5	Note again that the State of Utah will not furnish data to EDAW which has been previously furnished to the Air Force or other Air Force contractors.
5.4.1.5	8,9		The organization of such categories clearly illustrate once more the lack of attention being paid to socioeconomic data, human resources and impacts on the human environment.
5.4.3	12	2	We suggest EDAW consider making provisions for handling of information

Chapter	Page	Para.	Comments
			requested from state and local government agencies.
5.5 Appendix	21		Under listings for Utah, please note that the Utah MX Coordination Office not only prefers that all information requests be routed through them, they require that such requests be so directed.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:de

cc Ralph Starr
Steve Bradhurst
Lon Wyrick

May 18, 1981

Wayne Snowbarger
Captain, USAF
AFRCE-MX?DEVC
Norton AFB, CA 92409

Dear Captain Snowbarger:

We are pleased to have the ppportunity to comment on Deliverable #3 (Modular/Prefabricated Construction Capability and Evaluation) that was received in our office on May 11, 1981. We need to emphasize that the compressed review period makes it extremely difficult to do an adequate analysis. Originally it was stated that we would have a full seven (7) working days to comment on the various peports (Base Comprehensive Planning Coordination Letter #1). However, on Deliverable #3, we have had less than five days.

General Comments

1. We would concur that prefabrication/modular construction of many of the base facilities is theonly answer to meeting a compressed timetable if social and economic impacts are to be held to a minimum. It would be helpful to koow exactly to what extent the Air Force can or will accept these types of units.

2. Little information is given in this reprot on how the housing of construction and operation employees will be integrated into the existing communities within the deployment area. This is a recurring problem area.

Specific Comments

Chapter	Page	Para.	Comments
3.1.2.3	3	1	An expansion of the point aa to whether sufficient tame is available for completing the project efficiently and economically would be helpful in planning efforts.
3.3	6	1	Charts are referenced but not identified by a specific number or title. Chart

			on page 3 under paragraph A for office facilities shows error in FY 83. Should be 80,5590rather than 30,5500.
3.3.1	12	1	Document that existing firms can prdduce 200 units per gear. Also it is unclear as to whether one manufacturer can produce between 500-1000 units or whether this refers to the entire industry output. Also, how will increased demand over and above MX requirements effect the availability.
3.4.1.1	15	3	One or the other tables seems to be incorrectly labeded. Also, Figure 3.1.1 indicates a "table" for identification of specific projects, but no such table exists.
3.4.1.1	15	5	Document the Exxon Statement on potential oil shale development. i.e. inveatment, employees, etc.
3.4.2	17	1	Document the statements such as, adequate capacity, sufficient number, additional capacity is being developed, ability to supply 200-300 units, etc.
3.4.2	17-18	3-	Kirby, Inc. not only has franchized dealers in Utah, but also has a large manufacturing operation in Spanish Fork, Utah.
3.6.5	33	4-- 5	Misspelled words.
3.7	35	2	Part of parahraph is missing.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:sj

CC: Ralph Starr
Steve Bradhurst
Lon Wyrick
Ralph Starr

UTAH MX COORDINATION OFFICE

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SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

June 10, 1981

Wayne Snowbarger
Captain, USAF
AFRCE-MX/DEVC
Norton Air Force Base, CA 92409

Dear Captain Snowbarger:

We are pleased to have the opportunity to comment on the EDAW Deliverables 6, 7, 15 and 21. Due to the critical shortness of the timeframe, a complete review was not possible. We have, however, reviewed these four documents in some detail and trust that the comments provided will give you a clear perspective of state and local concerns.

Deliverables 9, 10, 13 and 16 are presently being reviewed and we hope to have comments to you within a few days. In addition, we have provided copies of these reports to several electric power companies, Mountain Fuel Supply Company and Mountain Bell Telephone Company. Their comments will be forwarded to you under separate cover.

Sincerely,

Kenneth C. Olson
Project Manager

cc: Ralph Starr
Steve Bradhurst
Lon Wyrick

GENERAL COMMENTS ON DELIVERABLES 6 AND 7: SYNTHESIS AND OVERVIEW AND EXECUTIVE SUMMARY

We have no comments on the Synthesis and Overview section since it is impossible to tell from the outline precisely what is intended. As this document goes through subsequent iterations, we intend to have substantive comments. It should be mentioned, however, that based on the "content outline", it appears that comprehensive interaction between components of the BCP and the private communities is minimal, if not non-existent.

The Executive Summary strikes us as being a good idea since we understand the purpose to be to highlight and summarize the most important components of the Base Comprehensive Plan (BCP) as currently conceptualized by the EDAW-MX team. As such it represents a focal point for assessing the EDAW-MX team's views on important issues. Our review comments are focused accordingly.

SPECIFIC COMMENTS ON DELIVERABLES 6 AND 7: SYNTHESIS AND OVERVIEW AND EXECUTIVE SUMMARY

Chapter	Page	Para	Comments
6.3	ii to iii		Socioeconomic/quality-of-life issues should be covered here, but as in other Deliverables, little mention is made of these important issues.
7.2.2	2	2	The phrase "many environmental considerations" is misleading. It must be qualified so that the unsuspecting reviewer realizes that most of these considerations are, in fact, geotechnical and engineering constraints, and are, therefore, not "environmental" in the normal use of the term.
7.2.2	2	3	We do not believe there was enough of a data base to do this. It is a rationalization of what was done, not a rationale. Selections of sites within vicinity zones that are euphemistically based on incomplete and questionable data are still, quite simply, rationalizations of personal preferences. Statements like this leave the uninitiated reader with the impression of reasonableness when, in fact, this is not the case.
7.2.3	2-3	1-3	If, as seems likely from this chapter description, yet another demographic set of data will be generated, we would encourage EDAW to fully coordinate with appropriate demographers in the State of Utah.
7.3.1	4	1	The idea that the BCP natural resources plan will include plans, programs and mitigation strategies for "protecting off-site resources, developed in cooperation with the regulatory agencies involved with the MX project" seems to be an inappropriate concept.

			Plans, mitigation programs and regulations for off-site resources should not be developed by EDAW but rather be developed by a variety of other actors including state agencies (Wildlife Resources, Water Rights, State Land Board), federal agencies (Bureau of Land Management, Fish and Wildlife Service, USGS, etc.), and to a limited extent, local governments. If EDAW in fact believes it has a charge to develop such plans, this matter should be clarified promptly.
7.3.2	Entire Section		This entire section ignores the realities of the operation of environmental laws which mandate the participation of specified federal and stage agencies in the development, review and approval of environmental quality plans ranging from waste water treatment through the handling of hazardous wastes. This section should specifically identify the need for BCP interaction with those entities having specific legal responsibilities for either development, approval or monitoring of such plans.
7.3.3	5	1	"Amending" the data may or may not be acceptable, depending on how it is accomplished, and tends to fall more on the negative side (i.e., it is not acceptable). This needs to be clarified.
7.3.3	5	3	The Utah MX Office is vitally concerned with the issues raised in the last paragraph of page 5 and the top of page 6. We wish to know how social and economic impacts are beginning to be identified. Since the Tier I DEIS that we recently reviewed does not cover socioeconomic/quality-of-life impacts in any detail, will a supplemental Tier I EIS be required?
7.3.3	6	1	The State of Utah would like the opportunity to review and comment on the expanded outlines.
7.3.3	6	3	Reference is made to the changes which will occur in the Nevada and Utah vicinity zones "even in the absence of MX." This statement is meaningless unless relative scale is discussed. Baseline growth compared to the tremendous impacts of MX deployment shows that this statement is misleading. The way this paragraph now reads suggests that MX will not create serious impacts because a lot of change is going to occur anyway. Change which will likely occur, at least in the Utah vicinity zones, is projected to be quite small in comparison to the enormous size of MX.
7.3.3	6	6	The fact that "EDAW's approach will involve manual calculations exclusively" is of some concern. Hand calculations are not superior to automated calculations, just slower. The important point to

			remember is the mathematical approximation (manual or automated) is simply an approximation that may or may not be a useful or appropriate applied to a real-world situation.
	7.3.3	6	7	Reference is made to changes that are unrelated to MX and that mitigation of non-MX related change is not thought to be justifiable. A more important issue here is the fact that for some types of facilities, the Utah vicinity zone communities have excess capacity for expansion in some facilities which either has been or is being paid for by existing taxpayers. In the same way that MX assistance should not be used to mitigate non-MX impacts, MX impacts should not be permitted to soak up low-cost existing capacity without reimbursement.
●	7.3.3	6	8	We fail to see how the reference on apprenticeship and training programs is appropriately part of EDAW's comprehensive base planning effort.
	7.4.1	8	2	The use of a gravity model for assigning traffic may or may not be appropriate; additional clarification/ justification should be provided.
	7.4.1	9	1	Human physiology? If EDAW would only spend half as much effort on socioeconomics, it would be more beneficial.
	7.4.1	9	2	This paragraph references interaction of the transportation component with other plans. Some reference should also be made to the fact that the transportation component of the BCP obviously must interface with off-base highway plans which will be developed by State Department of Transportation. It should be clear that such off-base transportation planning is the primary responsibility of state and local governments to which EDAW will make recommendations and suggestions, not the other way around.
	7.4.2	9	1	It is unclear whether energy demand factors include requirements for on- and off-base housing.
	7.4.3	10	1	This paragraph should speak to the method for interfacing the "planning activities" with state agencies.
	7.4.3	10	2	Makes no reference to Air Force MX program for renewable energy sources. It also includes a casual off-hand reference to available natural gas supply systems as though they were a reality. Such is not the case.
	7.5.5	14	1	Suggests that optional sites for life support are under investigation. We make a point of the fact that state and local governments have still not been given access to information regarding these sites. Continued failure of the Air Force and other contractors to make this information available seriously

			compromises various aspects of the base planning effort. In this regard, we note that consultation is needed with affected parties at the earliest stages of consideration of specific proposals. Failure to do so, only slows the process down.
7.6.2	16	4	It would certainly be our preference to discuss our recommendations for off-base land use, rather than being given a set of recommendations formulated by EDAW or the Air Force.

GENERAL COMMENTS ON DELIVERABLE 21: COMPREHENSIVE DESIGN GUIDANCE

We concur that the Comprehensive Design Guide is a desirable objective for determining harmonious architectural qualities, and we would encourage this process to remain compatible with the local surrounding areas. It is not difficult to envision that an entity as large as the proposed operating base could change the entire perspective of the region in which it is located. We will be very interested in seeing the illustrations that are designed for the base.

It appears there may be some conflict in the key responses articulated by the Air Force in chapter 21.1.1, and the mix of on-base versus off-base facilities that would be desirable by local elected officials. A decision on the on-base/off-base configuration would be extremely helpful in the local/state planning process.

SPECIFIC COMMENTS ON DELIVERABLE 21: COMPREHENSIVE DESIGN GUIDANCE

Chapter	Page	Para	Comments
21.1.3	3	4	Please provide more information on that Architectural Review Committee, membership functions, etc.
21.1.6	5	1	Please provide an example of a POGS.

GENERAL COMMENTS ON DELIVERABLE 15: UTILITY SYSTEM -- BERYL AND MILFORD

This "Utility Systems" report is fairly well structured and includes the basic needed categories. The proposal to issue this report five times in a 15-month period is a massive undertaking in paper work to say nothing of the review time required. The report warns us that it is incomplete because other information is not yet available. This is true, and as a result, review and comments at this time deal mainly with concepts and goals.

It is not at all clear that EDAW has a correct understanding of the State of Utah's water acquisition process. It is suggested that EDAW obtain the appropriate portion of the Utah code dealing with water rights acquisition, and after reviewing it meet with the staff of the Utah Division of Water Rights and Water Resources to discuss, 1) the historical water usage in the southwestern Utah Ground Water Basin and 2) the history of water rights transfers. This discussion should be summarized (as opposed to being scattered) in this deliverable.

It was mentioned for Deliverable Six and Seven and likewise appears in this deliverable, that EDAW is determining another, independent data set (i.e., demographics, and based upon that, water demands, electrical demands, etc.) that appear to bear little relation to the HDR data set shown in the MX DEIS. Although it is not

clear why it is necessary to develop an independent data set (we presume that EDAW has justification for such action) it is, nevertheless, incumbent upon EDAW to provide more detail to the Utah representatives who have the capacity to validate and suggest revisions to the assumptions and methodologies used to derive the data set.

It is quite distressing to see repeatedly mentioned throughout this deliverable, the notion that civilian employees will be located in a "new town" adjacent to or in close proximity to the base perimeter. Obviously, this notion, given its high visibility, is foremost on EDAW's recommendations list. As mentioned for Deliverables Six and Seven (as well as in all of our previous comments on the EDAW Deliverables), Utah state and local representatives should be queried for their preference regarding the location of the base and its interaction with its surrounding communities. From the lack of responsiveness to this proposal, as well as the notion of the "new town", it is apparent that the main operating base, if located in Utah, would be tantamount to an insulated, self-sufficient new town, not interested in interacting with established communities.

The report tells us that the plan should allow 4700 acre-feet of potable water at the MX Base and that the Air Force will have to acquire existing groundwater rights to obtain this water. Also, waste water will be reclaimed so that no additional water will be needed for irrigation around the Base. This amount of water required for the MX Base would be a small percentage of the estimated 65-70,000 acre-feet currently being withdrawn from the groundwater basin in the Escalante Valley. However, the report does not indicate how difficult this water supply may be to acquire.

Assumption is being made that this region will not require air conditioning capability. However, that is not consistent with the area. Especially in the case of controlled temperatures for computer and operations areas, it is believed a requirement will exist for air conditioning, and it is not clear if this requirement has been included in the total load factor.

SPECIFIC COMMENTS ON DELIVERABLE 15: UTILITIES SYSTEM -- MILFORD

Chapter	Page	Para	Comments
15.1.7	3	1	Although it is commendable that EDAW has allowed for expansion of water use at the base, the justification of the selection of the 4700 acre/feet figure should be justified. Why was this number selected and who are the potential users (residential, industrial, etc.)?
15.1.7.1	4	1	It is not clear from the way this paragraph was worded that EDAW has the correct understanding of water acquisition in Utah (see General Comments).
15.1.7.1	4	2	The basis for making the statement in this paragraph should be provided.
15.1.7.8	7	2-3	The figures in these paragraphs do not bear any relation to what the AFRCE has been discussing with the utilities It is suggested that EDAW and the AFRCE come to some decisions as to what the appropriate loads will be. Also, the two substations requirements should be discussed with AFRCE as well. We would need to know the actual operating voltage of the system to determine what kind of equipment interchange could be effected in case of an emergency.

15.2.1.1.	8	1	Again, the basis of the excess capacity estimates would be explicitly stated (professional figurements, percentage assumptions, projected growth rate, etc.)
Table 15.2-1			The basis used to derive the numbers in this table should be provided. Further, the figures seem to be at variance with what was estimated in the MX DEIS even though HDR data are included. For that matter, the HDR data are highly suspect as well. Footnotes G and H are especially disturbing; footnote G because of the aforementioned "new town" and footnote H because it makes little sense without back-up.
15.2.1.1.2	12	1	Enumerate the "various studies" upon which these demands are based.
15.2.3.1.1.1	16	1	Again, it is not clear that EDAW has a correct understanding of the water rights acquisition process in Utah.
15.2.3.1.1.2	16	1	Same comments as above -- 15.2.3.1.1.1/16/1
15.2.3.3	19	2	Same comments as above -- 15.2.3.1.1.1/16/1
15.3.1.1.3	23	1	This is unnecessarily obtuse; the narrative should be modified so that the meaning is unequivocable.
15.3.1.1.3	23	2	There is no Utah State Engineering Office; the state engineer is the director of the Utah Division of Water Rights.
15.4	35	1	Cedar City is not the closest town (which is, by the way, incorrectly used here) to Beryl; Beryl Junction, Modena and Enterprise are all closer.
15.4.3.2	46	1	There is no State Division of Health but there is a Department of Health and a Division of Environmental Health
15.7.2.2	107	1	Same as above
15.10.2	145	1	It is strongly recommended that EDAW review these recommendations with the AFRCE and that the AFRCE provide its true requirements in future discussions with the utilities.
15.10-1 15.10.3.1	145-146	all	As mentioned previously, these load requirements are greatly at variance with those which have been discussed between the AFRCE and the utilities. It is important that the AFRCE decides what the loads will be so that the utilities can respond effectively to their commitment to meet the Air Force policy requirements.

15.10.3.2	148	1-3	It has already been stated that several aspects of these paragraphs are disturbing. For example, the ancillary new town facilities, the new data set, the conflicting per-capita-use presumptions that are the AFRCE assumptions, etc.
15.10.6.2	148	4	Will the two transformers be required to support the base, or will one transformer be used as a back-up. This is unclear in the text.
15.11	151	all	This is ludicrous -- natural gas is not available and it is highly improbable that it will be available in the future. It is doubtful that the pipeline could support the proposed MOB site in Utah since the odds are against utilization of natural gas.

June 26, 1981

Wayne Snowbarger
Captain, USAF
AFRCE-MX/DEVC
Norton AFR, CA 92409

Dear Captain Snowbarger:

Enclosed herewith are additional comments on EDAW's Deliverables 9, 13, 15 and 16. We recognize that they are late but represent the fast turn around in the time frame available. Let me know if the comments are helpful.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:sj

Enclosures

General Comments on Deliverable 16: Communications Plan (Interim Report One)

It appears that this document, as written, is not a plan but rather an analysis of current telecommunications technology. The reprot seems to be an appendix to a more comprehensive document which would more clearly defin what this plan is supposed to do. However, if this is not the case, then we view the plan, as submitted, totally unacceptable as a telecommunications planning document.

The general analytical statements contained herein appear to be reasonable accurate predicted on the current and assumed future technology. However, the document relies extremely heavily on this future technology which may or may not be available at the time of implementation.

The statement is made in the summary portion of the report that, "In planning a community for the 1985-86 time froame, it is essential to consider the available technologies that will exist at the attime." We assume this "community" to be the operating base, and we would concur that the base indeed will be a community within itself. What is particularly bothersome is that no mention is made or even implied, as to how the communication system of this "community" will impact upon the existing communications already in place.

Specific Comments on Deliverable 16: Communications Plan (Interim Report One)

Chapter	Page	Paragraph	Comments
16.1.2	2	4	It appears that reference is beign made to the Bell System, and if so, we believe the comments regarding capability to be totally erroneous.
16.2	3	3	Obviously, these technological capabilitads for "office of the future" are just around the corner, and quite possible we will see significant change to this type of communications system. However, it seems urealistic to think that this type of technology will be commonplace in private homes within five years, ten years or even fifteen years. We need to know the time frames that are considered realistic for these new technological advancemants, and specifically how they fit in to the MX development plan.
16.2.1.3	5	2	How was it determined that such a massive t technological replacement program is oocurring? There are vey few non-common carriers who are in a position to acquire the necess easy right-of-ways for fiber optic systems. That is not to syay that the use of fiber optics is not eminent, and in fact happening, but to predict that it would happen in five to seven years is overly optimistic.
16.2.2	6	2	We concor with the technological forecast as

Chapter	Page	Para	Comments
			as espoused in this ection, however, we s would draw attention to the fact that electronic technology is changing so fast that longterm planning without access to extensive R & D data sources is nothing more than a shot in the dark. Again, notreferences are made to data sources beegg utilized in this plan.
16.2.2	7	1st full o	Herein the author discusses the advantages of fiber optics, but again the subject deals in broad generalizations which makes it anclear as to whether this analysisiis dealing with nationwide systems, local geographical systems, or a hupothetical system. We presume that reference is being made to nationwide long line telecommunications system design. Is this appropriate?
16.2.2.1	9	1	Again, we are discussiggfiber optics, and its unique characteristics, e.g., immunity to electro-magnectic interference and cross talk as well as its small physical size making it attractive for application in large communities. How does the "attractiveness for application in a large community" square with the fact that we are anticipating relatively small commuitees in the deployment area?
16.2.2.1	11	2nd fullq	Conceptually we agree with the statement on transition to a nationwide digital network, however, we would again stree that, to our knowledge, the "independent" telephone companies conversion time is not as rapid as this report would imply.
16.2.2.1.1	11	2	Contrary to the perspective of this paragraph, it is our opinion that a combination of both trunked and cellular systems would best suit the State of Utah. We do recognize however, that many regulatory and technical problems would have to be resolved. Additionally, we would note that there are other benefits to trunked-cellualr concepts beyond those espoused by this report.
16.2.2.1.1	12	2nd full	In our opinion, the first sentence is made out of context withthereality of the real world. Generally speaking, digital communications require a greater amount of spectrum to be used in a multi-paint system than the standard FDM method.

General Comments on Deliverable 9: AICUZ Study Interim Report #One)

We have no sufficient comments to offer on this deliverable at this time.

General Comments on Deliverable 13: Energy Plan - Beryl and Milford (Interim Report)

Virtually no citations are given in these documents that would allow the reader to judge the accuracy or the validity of the statements rendered. For example, the preliminary recommendations suggest the use of electrical resistance heating without saying why. Is it more convenient, more cost effective, more available, or what? We cannat provide useful comments under this set of circumstances.

General Comments on Deliverable 15: Utility Systems for Beryl and Milford (Interim Report # One)

The comments on this deliverable are applicable to both the Beryl and Milford sites regarding procedural statements, however, there will be some specific c comments directed to the individual sites as appropriate.

Information related to the Public Water Supplies was general in nature, but did basically address concerns of providing adequate and acceptable water for the MOB. We do recognize that as further information is available, revisions to this plan will be necessary. It would be advisable to more directly address water quantity requirements of the State.

This report spend most of its time and verbiage in reciting solid/hazardous waste regulations and alternative management techniques, but there is very litte little that can be evaluated. No consideration has been given to management of wastes produced by private support industries.

Narratives are academic in nature and provide optomistic projections of performance while exceed actual practice and experience. In view of the preliminary nature of this report, a detailed analysis of the information is not offered.

Mountain Fuel Supply Company offered the comments contained in the attached letter.

Specific Comments on Deliverable 15: Utility Systems - Beryl and Milford Interim Report One

Chapter	Page	Para	Comments
15.1.7.1	3	1	Potable water for the MX Base msut also comply with state and local requirements as well as the requirements adopted under the Federal Safe Drinking Water Act.
15.2.1.1	8	1	There appears to be some discrepancies in Table 15.2-1. Further clarification is needed to make an appropriate evaluation of the data contained therein. The potable water demands given would basically be for inside use of water only and additional water would be needed for outside irrigation needs.
Table 15.2.2	12		The sizing factor for the source and treatment was given as 1.9 times the average demends. We are required to use 2 in typical evaluations but do acknowledge that for the type of operations expected at these facilities and the practice of

Observation measure	Page	Basis value	Comments
			conservation measures this value may be sufficient. However, it will be necessary to review water use data or other acceptable information to allow a reduction.
15.2.2.1	14	1	This paragraph should indicate that public drinking water systems which include both community and non-community types that serve 15 or more connections or 25 or more people at least 60 days out of the year must meet the minimum standards.
15.2.2.1.2	15	1	Although Utah has basically incorporated the requirements of Uthe Federal Safe Drinking Water Act and the Interim Primary Drinking Water Regulations, certain more restrictive quality parameters have also been adopted.
15.2.3.1.1.3	16	1	It should be noted that the chemical quality given for wells in Table 15.2-4 does not include values for the MCL's which are critical inddetermining compliance of potential sources with respect to Federal and State quality standards.
15.3	20	1	We believe that the 400 gpd figures given in Milford doument should have been 400 gpcd.
15.3.1.1.2	23	1	In this paragraph it is mentioned that the well system would be connected to either a central treatment plant or directly to the distribution system. No mention was made regarding storage provssions, which are required.
15.3.1.2.1	23	2	We do question the dost ranking of the treatment processes to remove dissolved solids. Our experience has been that the electrodialysis treatment process is not the most cost effective.
15.3.1.2.1.2	24	1	If disinfection facilities are provided, provisions must be made to allow for proper detention time before the water is utilized (30 minutes).
15.3.4.2	32	1	Surface waters if used for domistic purposes, must recieve donventional water treatment or its equivalent.
Table 15.4-2	40		

Chapter	Page	Para	Comments
Table 15.4-2	40		Since the communities are not sewered, it is doubtful if the date presented in the tabulation is relevant or applicable. It is acknowledged that the data does provide an indication, but no realistic comparison can be made between unsewered and sewered communities. Data derived form other defense installations in similar climates may be more meaningful.
15.4.2.1.4	41	2	Wastewater quantity for construction worker is grossly inadequate. A reference should be to the Code of Waste Disposal Regulations for the rate of flow. It should be between 25 and 35 gpcd.
TAble 15.4-4	42	u.	Per capita flow is well below the ones u.c. under the Code. However, in light of flow reduction attainable, the unit rates appear to be reasonable expept that for construction workers.
15.4.2.1.8	43	1	Nature of construction operations needs to be amplified.
1514.2.1.31	43	1	Peaking factor is low for a defense installation. A reference should be made to DOD technical manuals outlining peaking factors.
15.4.3.2	46	1	The water quality criteria & effluent standards are established by the Utah Water Pollution Committee, and nto be the Division of Health. It is incorrect to refere to the Department of Health as the Division of Health. This correction is in order for the entire report.
TAble 15.4-5	50	t	Reclaimed water available for reuse should be approximately equal to average dry weather wastewater flow shown in Table 15. 15.4-4. There is a descrepancy between the information in these two tabulations. LOsses are not consistent. Explanation is required to shaw hw available reclaimed water is substantially less than wastewater flow.
15.4.4.1 to 15.4.4.4		All	Reduction in groudgwater withdrawal is unduly optimistic. There are certain losses in reclamation of wastewater which requires make-up water. This issue is not considere at all.

Chapter	Page	Para	Comments
15.4.3.9	59	2	It is not clear whether advanced treatment scheme addition type or for a separate stream.
Table 15.4-9	63		Effluent quality projections are very optimistic. It is questionable that ac activated sludge process would produce poorer quality effluent than the one produced by trickling filter process.
15.4.5.3.6	62	2	Without outlining the nature of treatment schemes, it is incorrect to indicate nitrogen and phosphorus depletion.
15.4.5.5	62	1	Statement about failure of activated sludge to produce a 10/10 effluetn with filtration is in conflict with the information given in Table 15.4-9, optimistic and and questionable.
15.4.5.5	62	3	Unless nitrification-denitrification, ammonia stipping or clinoptiliolite process os a part of treatment scheme, nitrogen is not removed. Phosphorus removal is a function of chemical coagulant used. Therefore, this statement is not entirely correct.
15.4.5.5.3	69	6	High head requirements of trickling filter porcess to a degree offsets disadvantage of aeration power requirements of activated sludge process. Improvements in aeration technology and modifications of activated sludge process have shown lower aeration power requirements than the one shown.
Table 15 4-10	70-71		Information contained in this Table is not clear. Estimates or projedtions on effluent quality energy requirements and O & M costs and perator skill requirements are optimistic and questionable.
15.4.6.3.1	73	1	It is questionable whether aerobically digesteds sludge dewaters poorly. In practice, it is found to be otherwise.
15.6.3.4.4	75	1	Gas storage and scrubbing are considered essential. Statements to the contrary are incorrect.
15.4.7	77	3	PVC and other plastic type material pipes should be included for available sewer pipe material.
15.7.2.2	107	1	Reference Utah Solid Waste Disposal Regulations dated July 17, 1974. Revisions

Chapter	Page	Para Par	Para	Comments
15.7.2.2	107	1		Reference Utah Solid Waste Disposal Regulations dated July 17, 1974. Revisions have been made concerning the relationship between the solid and hazardous waste management regulations. The new solid waste regulation is dated June 20, 1981.

ATTACHMENT 6

Draft MX A-95 Review Process

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Members of the Utah MX Intergovernmental Working Group

FROM: Ken Olson, Utah MX Coordination Office KCO

DATE: June 25, 1981

SUBJECT: "Draft" MX A-95 Review Process

As you are all aware, the Utah MX Intergovernmental Working Group has been designated by the Governor as the A-95 Review Authority for all Utah projects related to the MX Missile System.

In order to fulfill this responsibility, the process described in the attached document has been prepared in "draft" form, and is being forwarded to you for review and comment. We would appreciate receiving your written comments by July 10, 1981.

In addition, we are scheduling a meeting on July 17, 1981 to finalize this effort. The meeting will be held in the MX Coordination Office at 10:00 a.m.

UTAH MX A-95 REVIEW PROCESS

GENERAL

The proposed MX Missile System is of such magnitude that a number of Utah counties, communities, school districts, state agencies and special districts will be significantly impacted by the rapid population growth which will occur if the system is deployed in Utah's Great Basin region. It will be essential for the Department of Defense to provide targeted impact assistance for seriously impacted governmental entities in order for them to expand and improve their service and infrastructure capacities to mitigate the anticipated impacts.

One critical problem will be to identify, detail and plan for needed facilities and services both in and adjacent to the deployment area which are MX induced. As another issue, such facilities and services will also have the characteristic of needing to be built or implemented within very compressed time frames to minimize adverse impacts. It is imperative, therefore, that a mechanism be established that will facilitate a timely and workable A-95 review process which is fully integrated with the MX impact planning process.

ORGANIZATION

The Governor has deemed it essential that a single entity be responsible for Utah's policy making and planning coordination related to the deployment of the MX Missile System. The "Utah MX Intergovernmental Working Group" (IWG) was formed approximately one year ago to fill this role. The membership of the IWG consists of the executive committee of the MX Missile Policy Board (four members, all elected officials from the local deployment area), the Governor's MX Management Committee (four members including the Governor or his designee) and representatives of the Secretary of Defense (Air Force, Corps of Engineers, Office of Economic Adjustment).

Staff for the Intergovernmental Working Group is provided by the MX Missile Policy Office in Cedar City, and the Utah MX Coordination Office in Salt Lake City.

The MX Intergovernmental Working Group is presently functioning as the local/state/federal policy board on MX matters and will play a key role in MX impact planning. The IWG has also been designated by the Governor as the A-95 sign-off authority for all Utah projects related to MX. This paper briefly describes the process that is being developed to fulfill the A-95 review requirement and to insure that all MX projects are coordinated with appropriate local and state agencies.

The MX planning process is aimed at producing a planning and mitigation strategy that will allow for timely and orderly development of community infrastructure and state and local services. The MX A-95 process is designed to insure a comprehensive review and evaluation of all projects induced by deployment of the MX system, both at the local and state level.

MX IMPACT PLANNING PROCESS

The process by which MX induced facilities and service needs will be identified, evaluated, reviewed and approved or disapproved by the IWG is described below. In a following section, the approach for coordinating the normal A-95 process with the MX A-95 review will be explained in some detail.

1. Using a set of IWG specified procedures, standardized population projections and planning assumptions, state and local agencies impacted by projected MX populations will prepare plans describing, in detail, the scope and extent of anticipated impacts, potential mitigation strategies, specific facility and service requirements, etc. These plans will be submitted to both the MX Missile Policy Office and the MX Coordination Office for review.
2. The MX Policy Office and MX Coordination Office will closely review each entity's plan to determine conformance with planning parameters established and adopted by the IWG. Appropriate review, comments, suggested revisions, discussions and modifications will be undertaken.
3. Capital facilities, equipment needs and service requirements determined to be "eligible" for MX impact funding will be incorporated into a state and

local "MX Facilities and Service Plan" that encompasses all Utah MX impact responses. This "MX Facilities and Service Plan" will serve as a comprehensive multi-year master plan for mitigating the impacts generated or induced by MX construction and operations.

4. Items determined not to be induced by MX deployment will not be included in the master plan. Appropriate comments as to why any specific item failed to qualify for special MX funds will be provided to the proposing entity by the IWG.

5. The master "Facilities and Services Plan" will be reviewed and approved by the IWG and will serve as the basis for annual planning and mitigation programs developed by the IWG to coincide with federal budget cycles. Each year, an annual MX Facilities and Services Program, as finally approved by the IWG, will be submitted to the Department of Defense and to Congress as a basis for appropriation of MX impact funds. Approved projects will then be funded and monitored by the IWG.

COORDINATION OF STATE A-95 SIGN-OFF AUTHORITY AND MX A-95 SIGN-OFF AUTHORITY

The MX IWG is primarily interested in seeing to it that all local and state projects induced by the deployment of the MX system are incorporated into a master facilities and services plan. It is necessary that this effort be fully coordinated with other facility and service planning activities taking place within the state. The following procedure will be implemented to insure that the MX impact planning and mitigation process is in concert with, and complementary to, other planning and development strategies in Utah, and to insure that appropriate local and state agencies have an opportunity to review and comment on the MX Facilities and Services Plan.

1. When the master MX Facilities and Services Plan has been developed in draft form by the IWG, it will be submitted to the State A-95 Clearinghouse for full review and coordination. The state clearinghouse will seek review

comments from the appropriate state-level review bodies and area-wide A-95 clearinghouses. These comments will be forwarded to the IWG to assist in their revision and final approval of the plan. Note that the IWG is the final approval body on MX facilities and services plans and programs. This will insure that state and area-wide jurisdictions are fully aware of the projects being planned to mitigate MX deployment impacts and that they have an opportunity to comment thereon.

In a similar fashion, each annual MX Facilities and Services Program will be submitted through the State A-95 Clearinghouse process.

2. It is anticipated that many applications for federal assistance to domestic agencies (i.e., HUD, FmHA, etc.) will use, as justification, the potential impacts of MX deployment. As explained above, it will be the responsibility of the MX Intergovernmental Working Group to act as the A-95 sign-off authority on all applications related to MX. Thus, any grant application submitted to the State Clearinghouse for A-95 review, which includes potential MX impacts as part of the justification for the federal assistance request, will be processed as follows:

a) PROJECTS JUSTIFIED SOLELY ON THE BASIS OF MX DEPLOYMENT

The State A-95 Clearinghouse will forward all MX-related applications or pre-applications which were not included in the MX impact planning and mitigation process to the MX Coordination Office and MX Missile Policy Office. They will notify the applicant that the A-95 review action will be taken by the MX IWG.

The MX Coordination Office and the MX Policy Office will review the application regarding eligibility for MX funding. Projects determined to be "eligible" will be incorporated into the MX Facilities and Services Plan as herein described and projects determined to be "ineligible" will be returned to the applicant with appropriate comments.

b) PROJECTS PARTIALLY JUSTIFIED BY MX DEPLOYMENT

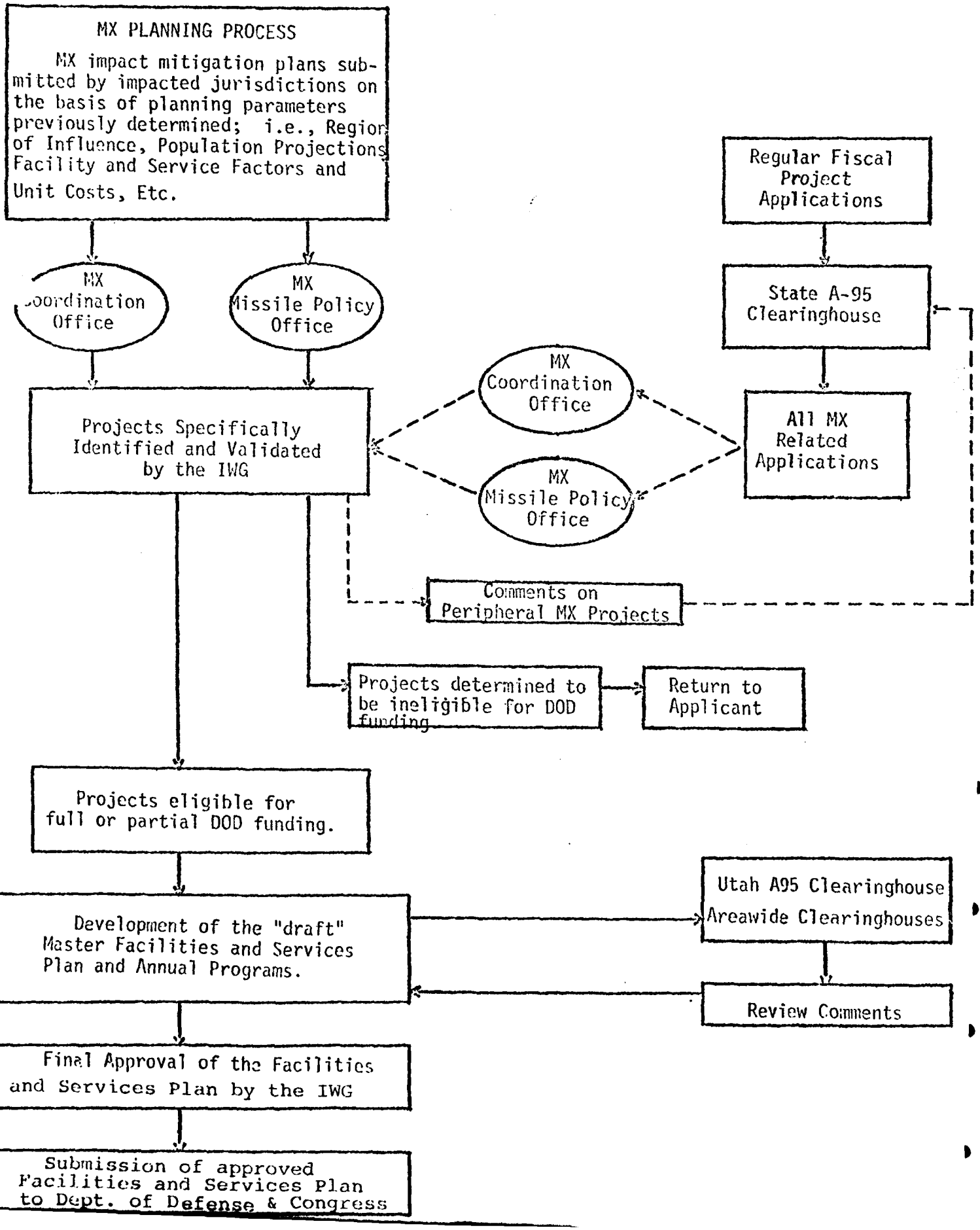
The State A-95 Clearinghouse will forward these applications or pre-applications to the MX Coordination Office and the MX Policy Office for review and comment. However, the State Clearinghouse will also process these applications through the normal A-95 review procedure (state and area-wide clearinghouses) and will provide the official A-95 comments to the applicant. However, those comments will not be considered complete without a response from the MX IWG. Comments from the MX IWG will be provided by the IWG within the prescribed A-95 time frame and will basically be as follows:

(i) Concurrence on the applications request with the IWG agreeing to fund that portion of the project that relates to MX impacts, conditioned upon the approval of the remaining grant application.

or

(ii) Non-concurrence of the application request on the basis that MX impacts are not a factor in the specific project.

MX--A95 REVIEW PROCESS



ATTACHMENT 7

Utah MX Intergovernmental Working Group

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Utah Intergovernmental Working Group Members

FROM: John Roach, Utah MX Coordination Office

DATE: May 19, 1981

SUBJECT: May Meeting of MX Working Group

The May meeting of the Utah Intergovernmental Working Group is scheduled for May 28, 1981 at 1:00 p.m. in Cedar City. The meeting will be held in Room 204 of the old Administration Building on the campus of Southern Utah State College.

A copy of the agenda plus the minutes from Aprils meeting is attached for your information and review.

Those flying into Cedar City will be interested to know that Skywest flights leave Salt Lake City at 7:20 a.m. and 9:20 a.m. arriving approximately an hour and fifteen minutes later. The Las Vegas flight leaves at 9:25 a.m. arriving at 11:40 a.m. If you need a ride from the airport, please contact me a day or two before the meeting.

Attachments

Revised

UTAH MX INTERGOVERNMENTAL WORKING GROUP

SUSC, Old Administration Building, Room 204

May 28, 1981 - 1:00 p.m.

A G E N D A

1. Welcome and Introduction

2. Minutes

3. Air Force Status Report
   - A. Base Comprehensive Planning (EDAW, Inc.)
   - B. Construction Management Plan - Status

4. Corps of Engineers Status Report
   - A. Life Support Study

5. Office of Economic Adjustment - Status Report
   - A. Deployment Area Housing Study
   - B. Other Items

6. MX Policy Board - Staff Report
   - A. Fiscal Year 1982 Budget Requests
   - B. Phase II Study
   - C. Planning Studies
   - D. Contracted Studies

7. MX Coordination Office - Staff Report
   - A. Fiscal Year 1982 Budget Request
   - B. Status of Impact Aid Legislation - 803 Study
   - C. Fiscal Management Study - Approval

D. A-95 Clearinghouse Process - Approval

8. Other Business

A. Schedule Next Month's Meeting

B. Sequence of Policy Board and Intergovernmental Meetings

UTAH MX INTERGOVERNMENTAL WORKING GROUP
SUSC, Old Administration Building, Room 204
May 28, 1981; 1:00 p.m.

AGENDA

I. Welcome and Introduction

II. Minutes*

III. Air Force Status Report

- A. Base Comprehensive Planning (EDAW, Inc.)
- B. Construction Management Plan

IV. Corps of Engineers Status Report

- A. Life Support Study

V. Office of Economic Adjsutment - Status Report

- A. Deployment Area Housing Study

VI. MX Policy Board - Staff Report

- A. FY 82 Budget Requests
- B. Phase II Study

VII. MX Coordination Office - Staff Report

- A. Status of Impact Aid Legislation
- B. Fiscal Management Study - Approval
- C. A-95 Clearinghouse Process

VIII. Other Businesss

- A. Schedule next month's meeting

*Indicates that information is attached regarding this agenda item.

UTAH MX INTERGOVERNMENTAL WORKING GROUP

Wednesday, April 22, 1981

Room 303, State Capitol - 1:00 p.m.

MEMBERS PRESENT:

Kent Briggs, State Planning Coordinator
Courtney Larsen, Governor's Office
Dale Carpenter, Dept. of Community & Economic Development
Chad Johnson, MX Missile Policy Board
Don Baer, U. S. Army Corps of Engineers
Colonel Ken Van Dillen, HQ USAF
Eldon Erickson, OEA
Mark Paxton, MX Missile Policy Board
Jack Sawyers, MX Missile Policy Board

ALSO PRESENT:

Kenneth Olson, Utah MX Coordination Office
Ralph Starr, MX Missile Policy Board
William Hurley, Utah Department of Transportation
Major Bob McMains, Utah MX Liaison Officer
Martin Prisco, USAF Norton Air Force Base
John Roach, Utah MX Coordination Office
Ann Keegan, Utah MX Coordination Office
Larry Hoover, Six County Planning Office
Terry Wirth, Wasatch Front Regional Council
Charles Bestor, MX Information Center
Keith Haimes, MX Concerned Citizens of Central Utah
Howard Leatham, Utah Dept. of Transportation
Homer Chandler, Mountainland Association of Governments
Craig Bott, Governor's Budget Office
Lisa Michele Hunt, Senator Garn's Office
Eric Zigas, EDAW Inc.
Larry Kennings, EDAW, Inc.
Denise Earle, Secretary
Alex Mansour, Utah Department of Transportation

Chad Johnson moved to approve the minutes of the February 25, 1981 Intergovernmental Working Group Meeting held in Cedar City. Courtney Larsen seconded the motion which passed unanimously.

Mr. Bill Hurley and Alex Mansour of the Utah Department of Transportation had been asked by the Utah MX Coordination Office and the MX Missile Policy Board to prepare a budget for transportation requirements for FY 82 that would deal with the transportation component of the planning effort for the short run as well as determining what the real requirements for road repair and construction would be using the most plausible scenario for

deployment and, also, preferred alternatives. The District 5 Office in Cedar City took the lead on analyzing these impacts. Mr. Mansour handed out information explaining the tasks undertaken to prepare this analysis. A map and summary of ownership of the land, and costs and projected construction and road repair were broken out by Fiscal Year 1982 and 1983. Using the most probable scenario, it was determined that a road would be needed to tie the operating base into Cedar City and a road constructed between the main operating base in Coyote Springs to the secondary base in Milford, Utah. It is estimated that the construction requirements for FY 82 would be 3.4 million dollars for pre-construction work to be expended during that fiscal year. Kent Briggs made a motion authorizing that the transportation package presented to the Intergovernmental Working Group be submitted to the Air Force and Congress for funding. Chad Johnson seconded the motion which passed unanimously. Ralph Starr commended Alex and the Utah Department of Transportation for the work that has been done on this effort.

UTAH FISCAL IMPACT STUDY PLAN

Mr. Olson advised that the Utah MX Coordination Office and the MX Missile Policy Board have been making contact with various institutions and groups to have a reconnaissance developed that would determine what the final impact analysis should contain. Contact has been made with John Sanger and Associates who did the fiscal impact work for Kitsap County. John Sanger has been asked to give us a proposal to do an evaluation that would bring us to the point of soliciting a bid from a contractor to actually do the fiscal impact analysis. The costs of this evaluation will be shared between the Utah MX Coordination Office and the MX Missile Policy Board as well as sharing in the direction of the work. Colonel Van Dillen stated that General McCarthy is concerned that this is just another study to look at fiscal impact which has already been done. Mr. Olson stated that this effort would get us to the point where we could establish the mechanisms and parameters for the fiscal impact study - the contract with John Sanger and Associates would essentially develop a scope of work. Jack Sawyers made a motion to approve this effort, Chad Johnson seconded the motion. The motion passed unanimously. Mr. Olson advised that the State of Nevada has contracted with the Urban Institute for their fiscal impact study.

FISCAL YEAR 1982 WORK PROGRAM

A memorandum was passed out which contained a summary of the state agencies' current funding request for FY 82 planning monies. The Budget Office is presently analyzing these requests to see how they correlate with the various budgets of these organizations. These requests will be finalized and submitted to the Subcommittee hearings for authorization. Mr. Olson stated that these hearings have been delayed until after the Air Force

has made its decision. The summary sheet included all of the state agency requests with the exception of the Utah Department of Transportation funding request.

Mr. Olson advised that the Governor's CETA funds would be used to do a study about the institutions of public and higher learning, labor training and vocational needs if MX is deployed. The cost of this study is about $35,000 which is only Utah's portion.

REVIEW OF DEIS COMMENTS

Mr. Olson stated that the state comments would be released on April 23, 1981 by the Governor. It was decided to submit the three reviews separately with a cover letter from the Governor which would encompass all of the reviews. It was noted that there were very few technical conflicts, if any. Nevada's comments are also similar to the State of Utah's. Colonel Van Dillen stated the the Final EIS will be released sometime during July.

AIR FORCE STATUS REPORT

Colonel Van Dillen reported that the Townes Committee (group of 14 members who are looking at the MX basing mode) is looking to see if all of the reasonable basing alternatives have been considered and to determine the best alternative. The Air Force has been making presentations to this committee at their request as well as recommending modifications to the present basing mode. The Townes Committee asked the Air Force to tell them what could be done to reduce the impacts or restrictions because of SALT II. The Navy has also made presentations about SUM and the Army has made a presentation on silos. The Air Force has also been asked about small missiles, launch under attack and Minuteman. Colonel Van Dillen also advised that Laxalt and Garn will be co-chairing the deployment hearings on MX in May and announced that three additional hearings would be held in Reno, Austin and Elko and a public hearing in Provo on April 30th. Colonel Van Dillen introduced Larry Kennings of EDAW, Inc. and stated that EDAW Inc. is the contractor that will be doing the Base Comprehensive Planning Study.

Colonel Van Dillen announced that Major McMains had been made a Lieutenant Colonel and offered the Air Force's congratulations. The Working Group also added their congratulations.

Governor Matheson and Chad Johnson testified before the Subcommittee on Military Installations and Facilities of the House Armed Services Committee about the "block grant" mechanism for impact funding. Mr. Olson also reported that the Office of General Council is reviewing that proposal and that the Office of Economic Adjustment gave a limited and qualified endorsement supporting the block grant approach.

Mr. Olson stated that he was requesting that the company of Peat, Marwick, Mitchell do a requirements analysis that would determine the fiscal grant management system that would be necessitated under a block grant program. This company will assess the necessary accounting and fiscal management system to establish proper distribution of the funds.

OEA STATUS REPORT

The boom town study has been sent out to all of the members of the Intergovernmental Working Group. It was primarily prepared for use by the local governments to identify the kinds of problems that they may be facing to help identify possible solutions to those problems. Eldon Erickson also reported that OEA is having Real Estate Research Corporation do a report dealing with housing impacts in Nevada and that portions of that report would be adapted to determine problems in Utah, manpower needs, etc. This study is currently in its third draft. It was requested that the State of Utah get a copy of the third draft to enable us to start adapting it. Mr. Erickson agreed to get a copy sent out immediately.

It was decided to hold the next meeting in the deployment area on May 27, 1981.

COE STUDY

Mr. Baer reported that the Life Support Study is essentially complete. He also reported that the Construction Management Plan is in its final stage now and should be out by the end of May. The Life Support Study will be released at the same time.

Martin Prisco advised that the Corps of Engineers would have two teams out in the deployment area the last week of April to do reconnaissance work for the Tier II effort. He also reported that casual use permits would be issued by BLM.

Mr. Johnson advised that he had received funding requests for $30,000 from the Five County Association of Government, $30,000 for the Six County Commissioner's Organization and $49,000 for Millard County and asked for the Working Group's A-95 review. Mayor Sawyers moved that we table them until the next meeting so that the requests can be reviewed. It was decided that copies would be mailed out and if the MX Missile Policy Board had received a response within a week, it would be assumed that the members are in agreement to approve them.

The meeting was adjourned at 3:15 p.m.

ATTACHMENT 8

MX Siting Review Board Materials

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: All Interested Persons

FROM: Utah MX Coordination Office

DATE: June 25, 1981

SUBJECT: MX Siting Review Board Meeting ,

One May 22, 1981, the first meeting of the MX Siting Review Board was held in Room 305 of the Utah State Capitol. The agenda and attendance list are attached. The discussion is summarized below.

Colonel Bill Sims (AFRCE-MX/DEV) began the meeting by introducitn the Air Force representatives, followed by the introduction of all others present. He discussed the responsibilities of the Air Force Regional Civil Engineer's Office for MX (AFRCE-MX) and the Ballistic Missile Office (BMO). AFRCE-MX is responsible for the siting and functioning of the MX weapon system.

Brig. Gen. Charles Lamb is the Air Force Regional Civil Engineer for MX. Within the AFRCE-MX are several division, including the Environmental Planning Division which is headed by Colonel Sims (AFRCE-MX/DEV). The deputy of this division is Lt. Colonel Bill Verkest. Within the Environmental Planning Division are several branches, including the Comprehensive Planning Branch which is headed by John Solid, (AFRCE-MX/DEVC). Siting activities are conducted in this branch. Major Mike Elliott coordinates MX weapon siting within the designated deployment area, and Captain Wayne Snowbarger coordinates siting for the main operating base.

The siting coordination process was then reviewed. The purpose of the MX Siting Review Board is to formalize the communications network in order to get interactive feedback on the MX weapon system siting proposals in a methodical way. The basing mode decision is expected in June of 1981, and Colonel Sims briefly discussed the land withdrawal process.

At present, 227 cluster (5291 shelters) have been preliminarily sited in all of the deployment area valleys in Utah. This gives the Air Force a 10 percent or 27 clusters maneuvering ability. Ultimately, the Air Force must choose 200 of the 227 clusters revised second-iteration site layouts for the Initial Operating Capability (IOC) valleys by June 19, 1981 (subsequently revised to June 30,1981).

The Air Force will review and react to the comments on the layouts. Further, the siting methodology is also open to review and comment. The IOC valleys layouts should be discussed in detail. The outcome of the site review process will be documented by the Siting Review Board's meeting minutes; decisions will be on a concensus basis indicating that the siting process is acceptable and/or amendments to the process will be incorporated. The Tier II process involves incremental approval of site layouts.

A clarification of the MX Siting Review Board decision-making process was requested; i.e., is the process act/react or interactive, what is the purpose of the board and the reasons for its creation. The Air Force prefers that the board have an act/react review and recommendation process having appropriate supporting documentation. It will not be a decision-making body. Of course, this process will be influenced by the data and constraint evaluations from the siting comments; the Air Force expects there to be environmental resource trade-off and mitigation proposals. Divergent viewpoints will be conveyed by the Air Force representatives to their superiors. Disagreements and resistance must be brought to the attention of the decision makers.

A concern was raised that the Air Force develop a process that facilitates the interchange of comments among board members. Successful dialogue would necessitate exchange of opinions/comments. The Air Force agreed and said that their siting comments would be open to review by all. It was suggested that the board members send copies of their siting comments to one another. The Air Force policy is that comments to be coordinated at the MX Site Review Board meeting, not prior; the Air Force wants an open, nonmanipulative review process.

In summary, the purpose of the MX Site Review Board is one of information exchange, coordination of siting layouts, review of siting conflicts and identification of appropriate mitigation measures.

The operation of the board was then reviewed. The Air Force will internally review the preliminary MX weapon system site layouts. The board members will be the focal points for distribution of the preliminary layouts within their own organizations and for the review of the layouts, which will be forwarded to the Air Force before board meetings. The comments will be discussed at the board meetings, and documentation of approvals or disagreements will be through the meeting minutes or letters/memorandums.

A clarification of the decision-making hierarchy was requested. The Air Force indicated that decisions following the Tier I decisions are dependent on the enabling legislation; decision-making authority could be delegated incrementally (possibly to the Secretaries of Defense and Interior), or Congress could retain the prerogative to make decisions at the legislative level. AFRCE-MX will prepare the land withdrawal proposals, which will then be sent to the Pentagon, the Corps of Engineers real-estate section and the BLM. Public hearings will be held on individual applications. The specific decisions would be made in accordance with the land withdrawal legislation.

The Air Force was asked to clarify under what conditions the Air Force decision makers changing the board's recommended approvals. The Air Force suggested that, for example, decisions could be made to not site the weapon system in all

or part of controversial valleys, or to site the weapon system outside of the suitability zones (which would require a supplemental Tier I environmental impact statement).

The BLM asked who had participated in the development of the siting criteria. The Air Force said that the BLM had been involved in all major aspects of siting. They had provided the Air Force as much feedback and assistance as possible, given the BLM's manpower constraints.

The operation of the board was then discussed in greater detail. ERTEC Western prepares the site proposals. The Air Force cursorily review these for adequacy. The focal points for recommendations would be the board members.

A question was raised about the participation of federal agencies (in addition to the BLM and US Fish and Wildlife Service) on the board; the Air Force asked for clarification. It was suggested that the USDA and USDOT, as well as other federal agencies, could conceivably be interested in reviewing the site layouts, but there is no opportunity for this to occur as the board is currently structured. Coloned Sims said that the Air Force would contact the Federal Regional Council in Denver (Region VIII) and solicit the participation of other interested federal agencies. The Corps of Engineers suggested that participation on the board be restricted to land managers. The Forest Service indicated that to date, their agency had been neglected by the Air Force. Colonel Sims agreed that there were problems and said that the Air Force is currently attempting to resolve them. The Air Force said that they would prefer written comments on the site layouts; maps are acceptable supporting documentation.

The siting process was then reviewed. The system was overviewed, showing the Designated Assembly Area (DAA) connected to the Designated Deployment Area (DDA) via the Designated Transportation Network (DTN), which also connects the clusters, which are connected to the shelters via unpaved clusters roads. The conceptual regional layout proposal was then discussed. The distance from the DAA to the nearest cluster is about 30 miles, from the DAA to the nearest Area Support Center (ASC) is about 100 miles, from the DAA to the farthest cluster is about 330 miles, and from ASC to ASC is about 110 miles. The average speed of the transport vehicle is 25 miles an hour. The DTN will be open to public use. In fact, only the fenced physical facilities (shelters, cluster maintenance facilities, area support centers, etc.) will not be accessable to the public. The Air Force reiterated their policy of unimpared public access during construction and operations.

THe MX land withdrawal concept was then reviewed. The legislative proposal will contain survey legal descriptions for the sites in the IOC valleys, as well as a Tier II Environmental Assessment. Protracted legal descriptions will be provided for the remaining deployment area sites. Congressional approval will result in segregation of all of the land parcels needed to meet the MX requirements. The surveyed sites in the IOC valleys would be immediately released to the Air Force; the Department of Interior would be empowered to release the remaining IOC sites on an incremental basis, according to procedures approved by Congress.

The land withdrawal for the IOC was then discussed in greater detail. The IOC land withdrawal proposal will include: the main operating base and facilities,

the designated assembly area, the operational base test site, ten missile clusters (230 shelters), the designated transprotation network and the cluster roads. The Tier IIA environmental assessment for the main operating base site will be written by HDR; EDAW Inc. is the Air Force consultant doing the Base Comprehensive Plan for the main operating base. The Corp of Engineers will manage the construction activities; they are the Air Force's construction agent.

The Air Force said that the siting layouts will vary according to the siting criteria applied. The Air Force wants to develop a generic siting process that will work regardless of the criteria used. The Air Force was asked whether changes in the siting criteria would affect the suitable/siteable area boundaries. The Air Force said that the criteria do affect the siting boundaries.

The representative of the Southern Paiutes said that the tribe was having difficulty dealing with the multiple-track environmental tiering process. Colonel Sims acknowleged the tribe's concerns but indicated that the layered process was due to the Air Force's tight constraints.

The siting criteria were then discussed in detail. The geotechnical requirements (exclusion criteria) are areas where the depth to bedrock is less than 50 feet, depth to ground water is less than 50 feet, the grade is greater than 10 percent, and the drainage spacing is unacceptable (e.g., there are two 10-foot drainages less than a thousand feet apart). The geotechnical considerations (avoidance criteria) are areas where there is advers terrain, perrenial drainage, playas, ground cracks, sheet flooding or potentially active faults

Environmental and cultural site factors were then discussed. The exclusion criteria include wilderness areas, Indian reservations, forests, parks, monuments grasslands, preserves, wildlife refuges, Indian grazing lands, historic sites and population centers. Also considered are the Corps of Engineers exclusion areas, areas of high potential economic resource areas (mineral), and population stand-off distances (18 nautical miles from communities of more than 25,000 people or three nautical miles from communites of more than 3,000 people).

Avoidance and mitigation factors were then discussed. These include the legal and policy restraints authorized in the MX DEIS, such as threatened and endangered species, historic properties, sacred sites, air quality nonattainment areas, prime farmlands and paleontological resource areas. The stand-ff requirements include roads and highways, power lines, pipelines and inhabited buildings.

Environmental and cultural resources were also considered. These include sensitive sensitive species habitiat and natural areas.

A question was raised about HDR and ERTEC suitability zones conflicts. The Air Force was asked to specify how the data was provided, since the states need to verify the accuracy of the constraint data. The Air Force agreed to furnish environmental resource constraint maps to Utah.

The siting methodology was then discussed. The geotechnically suitable area boundaries are defined; the layouts are the delineated within the geotechnically suitable/environmentally siteable boundaries. To date, resiting has been by bilateral arrangement (i.e., between the Air Force and special interest group or individual). The siting review board will open up this process.

M-X DEPLOYMENT AREA SITING COORDINATION MEETING #1

PROPOSED AGENDA

1. INTRODUCTION - USAF
2. INTRODUCTION OF ATTENDEES
3. SITING COORDINATION GENERAL REVIEW AND DISCUSSION - ALL
   - A. PURPOSE
   - B. MODE OF OPERATION
   - C. DECISION AUTHORITY
   - D. OTHER
4. OVERVIEW OF THE SITING PROCESS
   - A. M-X LAND WITHDRAWAL CONCEPT
   - B. IOC VALLEYS - FOLLOW-ON VALLEYS
   - C. SITING CRITERIA
   - D. SITING METHODOLOGY
   - E. MITIGATION ISSUES
5. OVERVIEW OF SITING LAYOUT DRAWINGS
   - A. REGIONAL LAYOUT
   - B. IOC VALLEYS - DRY LAKE (NEVADA ONLY) PINE AND WAH WAH (UTAH ONLY)
   - C. FOLLOW-ON VALLEYS - CAVE, DELAMAR, PAHROC, MULESHOE (NEVADA ONLY)
   - D. DESIGNATED TRANSPORTATION NETWORK (DTN)
6. GENERAL DISCUSSION - ISSUES FROM THE FLOOR
7. DISTRIBUTION OF ADDITIONAL SITING MATERIALS
8. ADJOURNMENT

22 MAY 81 SITING COORDINATION MTG

NAME	ORGANIZATION	TELEPHONE
COL WM SIMS	AFRCE MX/DEV	714 382 4891
LTC WM VERKEST	" " "	" " "
JOHN K SOLLID	" " DEVC	" " 6081
MAJ M.W. ELLIOTT	" " "	" " "
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Morgan Wheeler	Corps of Engrs, Real Estate	916-440-2563
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Kenneth C Olson	Utah State MX Coordination Officer	(801) 364-9647
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Dave Davis	BLM Utah State Off	5345646
Roy Edmonds	BLM Richfield	896 8221
Carl J. Thurgood	BLM Richfield	896 8221
Jim Messerli	U.S. Fish + Wildlife	208/334-1490
Robert Benton	"	(801) 524-4430
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Richard Jameson	Paiute Indian Tribe	(801) 586-1111
Pete Wilkins	BLM Cedar City	(801) 586-2401
Ann Keegan	Utah MX Coordination Off	(801) 364-9647
John Roach	" " "	" " "
Pam Wade	- Deseret News	
Stan Holmes	- MX Information Coalition	581-9027
Gilbert Moore	- Thiokol Corp.	(801) 676-1216
Alan J. Silver	- TRW	(714) 382-3452
Earl Hindley	BLM-UT. State Office	(801) 524-5331
Dr Jim Magi	ERTEC Northwest	206 545730
Stanley Madsen	Ertec Western	(213) 5956611

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

M E M O R A N D U M

TO: Ken Olson, John Roach, Ann Keegan

FROM: Paul Cox Paul

DATE: June 26, 1981

SUBJECT: MX Siting in Pine and Wah Wah Valleys

I have been reviewing comments for the various state agencies on the second iteration of the Air Force MX siting in Pine and Wah Wah Valleys. It appears to me that the second iteration differs from the first only in relatively minor details such as the precise location of missile shelters, angle of roads, etc. The only exception I can find to this is missile cluster number one in Wah Wah Valley which has been shifted slightly eastward, thereby partially avoiding critical wildlife habitat. By constructing transparent overlays of predicted ecological disturbance zones at a radius of 1.5 km from each DDA, I can find no significant difference from iteration one ecological disturbance zones other than the single exception noted above. I am therefore forced to conclude that little attention has been given by the Air Force to the state comments supplied on iteration one. This conclusion is supported by the comments of the various state agencies which we have recently received.

Given the paucity of site-specific environmental data, the lack of distortion-free maps, and the extremely sketchy data base, I suggest that it is premature to propose small-scale changes in the location of individual shelters to the Air Force. In my opinion, at this stage, it would be far more useful to discuss the shifting or removal of entire missile clusters. For example, cluster five in Pine Valley currently divides key wildlife habitat into three distinct biogeographical islands. Its removal or repositioning would allow a north-south wildlife corridor, avoiding the almost certain decimation of the big game populations which would otherwise occur.

One general problem with the first and second iteration schemes supplied by the Air Force is the lack of specification of all MX features in the areas concerned. The current iterations detail only DDAs, but do not include DTNs or OBs.

It is very difficult for the state agencies to predict interactive and cumulative impacts of the weapons system deployment unless all MX features are considered simultaneously. It would perhaps be useful if the state were to request from

the Air Force on future iterations, maps of the weapons system which detail all MX features in the specified area.

I would greatly appreciate your advice, suggestions, comments, criticisms, exhortation or warnings on this matter as I wish to draft a response consistent with state policy and with your way of thinking. I am very aware of my ignorance on many MX matters, and always appreciate any suggestion you may wish to give me on completing my assigned tasks.

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111

Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

June 30, 1981

Major Mike Elliott, USAF
AFRCE-MX/DEV
Norton Air Force Base, CA 92409

Dear Major Elliott:

The various agencies and departments of the State of Utah, together with our staff, have carefully reviewed the second iteration on the proposed weapons systems deployment in Pine and Wah Wah Valleys. It appears that with the exception of missile cluster #1 in Wah Wah Valley, the second iteration differs from the first only in minor details such as the precise locations of missile shelters and road branching angles. By comparing ecological disturbance zones at a radius of 1.5km from each DDA, no significant differences between the first and second iteration can be found other than the single exception noted above. We are therefore forced to conclude that little attention has been given by the Air Force to the state comments supplied on iteration one; this conclusion was confirmed yesterday in a telephone conversation with you when you indicated that the comments will first be reviewed by the Air Force in the preparation of iteration number three.

At this stage in the siting process, we suggest that it is premature to propose small-scale changes in the location of site-specific MX features, and that a more useful dialogue between governmental agencies would concern siting decisions at a cluster and valley level. The paucity of site-specific environmental data and the extremely coarse-grained data base currently available would exacerbate the arbitrariness of siting individual shelters; however, we could, with our current data resources, provide valuable advice and commentary on siting decisions on a more zonal level. Given adequate lead time, the state could utilize a heuristic procedure to identify environmentally sensitive areas and provide the Air Force with a hierarchy of zones or valleys to be considered for exclusion from weapon system deployment.

Given that such a process has yet to be implemented, the following comments are offered on the second iteration of the weapons systems deployment in Pine and Wah Wah Valleys with the understanding that the state does not forfeit the right to alter siting recommendations in these valleys should these recommendations later conflict with a more global analysis of weapons system deployment in Utah.

As was previously stated in the comments provided on iteration one, both Pine and Wah Wah Valleys have extreme agricultural, biological and geochemical importance to Utah. Both valleys are important for grazing and ranching, as breeding grounds for wildlife, for potential mineral developments, and for archeological sites.

Although adverse impacts would be felt throughout the state, such impacts would be particularly deleterious to the several Utah families who have lived and worked in the valleys for generations. It is therefore emphasized that potential MX sitings in these valleys be made with a particular sensitivity to the important resources and people found there, and that specific siting decisions be made only after a careful acquisition of a detailed data base is made.

It is specifically suggested that the southern ends of both Pine and Wah Wah Valleys be excluded from weapons system deployment. The present proposed positioning of cluster number five in the southern end of Pine Valley would severely impact several important resources:

1. Critical water developments used for agricultural purposes.

2. Critical wildlife habitat.

   a. Cluster #5 divides the key pronghorn antelope habitat into three discreet bio-geographical islands, while its removal will allow a north/south corridor to exist along the west side of the valley. The protection of this corridor would partially prevent the destruction of the antelope herd that otherwise would result from partitioning the corridor into small islands.

   b. Cluster #5 severely impacts known sage grouse leks.

   c. Cluster #5 severely impacts introduced prairie dog colonies.

   d. Cluster #5 severely impacts known raptor nests.

3. Mineral resources -- cluster #5 would particularly impact the well-field area for the Getty-Phelps Dodge molybdenum deposit.

The present proposed positioning of cluster #1 in the south end of Wah Wah Valley would also severely impact several important resources.

1. A well-established ranching operation which is on the more productive portion of the valley.

2. Key pronghorn antelope habitat in the southwest portion of the valley and the wildlife associated with Wah Wah Springs.

3. The power-line corridor for the Pine Grove molybdenum project.

It should be noted that singling out these two clusters for special attention does not indicate a lack of deleterious impacts from the other clusters; specific comments from the various state agencies, which detail potential impacts from the various cluster groups, should be studied.

It should also be noted that this analysis was completed in the absence of a sufficient description by the Air Force of the proposed weapons system. Specific disturbances and structures, including, but not limited to, borrow pits, pipeline and transmission line routings, area support centers and designated transportation networks, construction camps and remote surveillance sites, were either not shown on the maps provided or not described in sufficient detail to predict the possible synergistic and cumulative impacts of the entire weapons system. In this sense,

an accurate prediction of possible impacts yet awaits a complete description by the Air Force of the proposed federal action, and the Air Force acquisition of a scientifically adequate environmental data base for the siting localities.

Sincerely,

Kenneth C. Olson
Project Manager

KCO:pac

Enclosure -- state agency comments

cc: Steve Bradhurst
Ralph Starr

state of utah

JUN 10 1981

DIVISION OF WILDLIFE RESOURCES

DOUGLAS F. DAY
Director

1596 West North Temple/Salt Lake City, Utah 84116/801 533-9333

June 10, 1981

Mr. Kenneth C. Olson
Project Manager
Utah MX Coordination Office
448 East 400 South, Suite 103
Salt Lake City, Utah 84111

Dear Ken:

Reference is made to our constraint analysis for Pine and Wah Wah valleys (UDWR letter to Utah MX office, November 25, 1980); our general and specific comments on DTN corridor alignments in Pine and Wah Wah valleys (UDWR letter to Martin Marietta Aerospace, April 2, 1981); and your May 18, 1981 request for additional comments on MX missile shelter sites, remote surveillance sites, cluster maintenance facilities, cluster roads, and portions of the designated transportation network in Pine and Wah Wah valleys.

Since only portions of the DTN are shown on the May 1981 maps with the same alignment that was shown on February 1981 review and comment maps, we can only repeat the recommendations in our letter of April 2, 1981 to Martin Marietta Aerospace, that the DTN should be realigned to the bottoms of both Pine and Wah Wah valleys with a configuration that would avoid important wildlife water holes, key habitat and other important wildlife habitat.

The absence of site-specific biological data limits our evaluation of shelter sites, CMF and other MX features to recommendations based largely on general knowledge of the area. This deficiency limits potentials for adequate protection of the wildlife resources. Therefore, the data and recommendations in our constraint analysis also is still applicable, subject to the following discussion. This matter should be discussed with the Air Force.

Wah Wah Valley

Old cluster group No. 1 has been moved entirely east of the DTN as we (and possibly others) recommended in the constraint analysis. Thus, the pronghorn antelope key area south of Wah Wah Springs will be subject to less initial direct disturbance while the remainder of the valley will absorb the other shelters and related MX features. The unchanged DTN will still constantly impact the lower east portion of the pronghorn antelope key area and should be moved farther east. Shelter site 1-6 would impact a minimum of one wildlife water hole in Section 29 in the key area and should be moved. The pronghorn antelope key area south of Wah Wah Springs should be designated a mitigation habitat area and should be developed and managed accordingly for pronghorn

GOVERNOR
Scott M. Matheson

DEPT. OF NATURAL RESOURCES
Gordon E. Harmston
Executive Director

WILDLIFE BOARD
Roy L. Young — Chairman
Lewis C. Smith
L. S. Skaggs
Warren T. Harward
Chris P. Jou[illegible]

antelope, mourning dove, raptors and other wildlife locally impacted by MX. Water developments, and range improvement by management of domestic livestock grazing should be a part of the mitigation.

Old cluster group No. 2 has been moved to lower elevations on the west slope of the San Francisco Mountains. Shelter sites 2-3, 2-4, 2-5 and the DTN, 2-19 and 2-22 would cause significant impact to pronghorn antelope, mourning dove and other wildlife using Dutchman and Newhouse reservoirs and the water in Section 17 on the bench northeast of the Wah Wah Ranch. These 5 shelter sites and a segment of the DTN should be moved.

The south part of old cluster group No. 3 has been moved east to lower elevations; so the important pronghorn antelope habitat north of Wah Wah Springs will be subject to slightly less initial direct disturbance. The north part of old cluster group No. 3 has been moved south in Lawson Cove; so the chukar habitat in the Gray Hills will be subject to slightly less initial direct disturbance, but pronghorn antelope would still be highly impacted.

Significant impacts to pronghorn antelope and raptors would result with these changes. Shelter site No. 3-8 of cluster group No. 3 is within one mile of active golden eagle and prairie falcon nests in Section 28. Shelter sites 3-11, 3-12 and 3-18 and the cluster maintenance facility and alternate cluster maintenance facility are within one mile of a prairie falcon nest on fifteen mile point in Section 14. Shelter sites 3-1 and 3-16 are within one mile of a minimum of one wildlife water hole in Section 29. These 8 shelter sites and cluster maintenance facilities should be relocated to other areas of lower wildlife and habitat values to protect the wildlife resources as recommended in the constraint analysis. MX features should be located outside a minimum one mile protective buffer zone for each raptor nest (raptors have alternative nesting sites, and any nest may be inactive for a given year and active the following year). This protective buffer zone is necessary to prevent excessive disturbance to the raptors and possible abandonment of their nests.

Old cluster group No. 4 has been moved to various locations around Brown Knoll in areas that would require further study to determine if proposed new locations of MX DDA would be more or less detrimental to wildlife resources.

The old cluster group No. 5 has been moved to lower and higher elevations on the north and northwest slope of the San Francisco Mountains east of Wah Wah Valley Hardpan. The DTN and cluster road for cluster group No. 5 would cause high significant impact to pronghorn antelope, mourning dove and other wildlife using Wah Wah Well at the north end of Wah Wah Valley Hardpan. Shelter sites 5-2, 5-3, 5-6, 5-7, 5-8, 5-18 and 5-20 would impact wildlife using East Hardpan reservoir, Lakeview Reservoir No. 2 and Lakeview Reservoir. These nine MX features should be moved to other areas of lower wildlife and habitat values to protect the wildlife resources. MX features should be located outside a minimum one mile protective buffer zone for each wildlife water hole. This protective buffer zone is necessary to prevent disturbance to watering wildlife that could result in abandonment, mortality

and loss of production during dry periods. In Wah Wah Valley, 19 shelter sites, 3 DTN segments, 2 CMF and 1 cluster road would adversely impact a minimum of 9 water holes, 3 raptor nests and pronghorn antelope key area.

Pine Valley

None of the MX missile cluster groups Nos. 1, 2, 4 and 5, or shelter sites 3, 4, 6, 7, 9, 12, 16 and 18 and RSS2 of cluster group No. 3 has been relocated to areas of lower wildlife and habitat values to protect wildlife resources as we recommended in our constraint analysis. There has been no significant change in the DDA to mitigate impacts on wildlife and habitat. Shelter sites, CMF and alternate CMF are still spread throughout the key pronghorn antelope habitat and year-round ranges and key sage grouse winter and assumed nesting habitat surrounding the two strutting grounds. The latest proposed DDA will have high significant impact on all the pronghorn antelope, sage grouse, mourning dove and other wildlife in the valley, including pronghorn antelope using habitat within the Desert Experimental Range. Water sources for pronghorn and mourning dove are additional high value habitat features that will be significantly impacted by the project.

Old cluster group No. 1 is in the same general location. Shelter sites 1-1 and the DTN, 1-2, 1-3, 1-4 and the DTN, 1-6 and the DTN, and 1-18, would impact wildlife use of a minimum of 4 water holes.

Old cluster group No. 2 has been moved east to lower elevations so the pronghorn antelope key habitat and 3 raptor nests (2 golden eagle and 1 prairie falcon) on the foothills and higher peaks of the Needles would be subject to slightly less initial direct impact. Shelter sites 2-5, 2-6, 2-10, 2-12, 2-13, 2-14 and RSS and alternate CMF, and 2-15, 2-16, 2-17, 2-19, 2-21 and 2-22, would adversely impact wildlife use of a minimum of 8 water holes.

Old cluster group No. 3 has been moved slightly south. Shelter sites 3-1, 3-3, 3-4, 3-5 and the DTN, 3-6, 3-7, 3-8, 3-9, 3-11, 3-12 and 3-18, would adversely impact a prairie falcon nest and wildlife use of a minimum of 8 water holes. In addition, 4 raptor nests (one red-tailed hawk, two prairie falcon and one golden eagle) south of Pierson Cove slightly more than one mile distant would also be impacted. The DTN between State Highway 21 and the Desert Experimental Range (south boundary) would impact wildlife use of one additional water hole.

Old cluster group No. 4 has been extended slightly south on the south end. Shelter sites 4-4, 4-5, 4-6, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 4-13, 4-14, 4-15, 4-17 and the DTN, 4-21, 4-23 and the DTN and alternate CMF, would adversely impact one raptor nest and wildlife use of a minimum of 13 water holes. In addition, hunting habitat for 5 pairs of prairie falcons (5 nests) 2 miles distant, would also be impacted.

Old cluster group No. 5 has been moved slightly south and east to lower elevations so the important prairie falcon nest and feeding area at the south end of Elephant Back would be subject to slightly less initial direct impact.

Shelter sites 5-3, 5-6, 5-7, 5-8, 5-10 and the CMF, 5-11, 5-12, 5-13 and 5-16, are within 2 miles and would adversely impact 2 known sage grouse strutting grounds in Section 3, T. 29 S., R. 18 W. and associated nesting habitat surrounding the strutting grounds. Shelter sites 5-1, 5-3, 5-4 and the DTN, 5-5 and the DTN, 5-6, 5-7, 5-8, 5-13, 5-18, 5-19, 5-20, 5-21 and 5-22 are within one mile and would adversely impact wildlife use of a minimum of 12 water holes. A minimum of 4 wildlife water holes are within the two-mile buffer zone of the sage grouse strutting grounds. Therefore, sage grouse would be extremely impacted by loss of nesting habitat and disrupting disturbance to the strutting grounds, adjacent nesting habitat and water holes.

In Pine Valley, 61 shelter sites, 3 cluster maintenance facilities, 9 DTN segments and 1 RSS would adversely impact a minimum of 44 wildlife water holes, 2 known sage grouse strutting grounds, 11 raptor nests and many thousands of acres of wildlife habitat in pronghorn antelope key areas. These features should be relocated to other areas of lower wildlife and habitat values to protect the wildlife resources as recommended in the constraint analysis. The one mile buffer zone for raptors would prevent excessive disturbance and possible nest abandonment, and the two-mile buffer zone for sage grouse would protect the winter range, strutting grounds and nesting habitat so vital to the continued existence of this sage grouse population. The one-mile buffer zone for water holes would prevent disturbance and possible abandonment of use for pronghorn antelope and other wildlife. The number of project features and habitat features within UDWR recommended buffer zones is shown in the following summary.

SUMMARY OF NUMBER OF PROJECT AND HABITAT FEATURES WITHIN BUFFER ZONES

	Wah Wah Valley						Pine Valley					
Cluster	SS	DTN	CMF	RSS	CR		SS	DTN	CMF	RSS		Totals
#1	1	1	--	--	--	2	6	3	--	--	9	11
#2	5	1	--	--	--	6	12	--	1	1	14	20
#3	6	--	2	--	--	8	11	2	--	--	13	21
#4	--	--	--	--	--	0	15	2	1	--	18	18
#5	7	1	--	--	1	9	17	2	1	--	20	29
	19	3	2	0	1	25	61	9	3	1	74	99
	Water holes					9	Water holes				44	53
	Raptor nests					3*	Raptor nests				11**	14
							Sage grouse strutting ground				2	2

*Does not include raptor nests on the west side of the San Francisco Mountains.

**2 within one-mile buffer zone.

The locations of the UDWR proposed buffer zones plotted on enclosed DDA layout maps provided by the Air Force show that some of the wildlife habitat features (raptor nest, wildlife water hole and/or sage grouse strutting ground-nesting area) would be impacted by more than one MX project feature. Also, one MX project feature may impact more than one wildlife habitat feature. For example, in Wah Wah Valley, the prairie falcon nest at fifteen mile point would be impacted by shelter sites 3-11, 3-12, 3-18 and a CMF. Southwest, one shelter site, 3-8, would impact a golden eagle nest and a prairie falcon nest in Section 28. In other examples there would be multiple overlapping of buffer zones. In Pine Valley, two sage grouse strutting grounds in Section 3 and adjacent nesting area, four wildlife water holes and pronghorn antelope key area would be impacted by shelter sites 5-3, 5-6, 5-7, 5-8 and 5-13 within one-mile buffer zones also within a larger two-mile buffer zone that would be additionally impacted by shelter sites 5-10, CMF, 5-11, 5-12 and 5-16. All of the impacted habitat features described are important and should be avoided. Additional field studies (Tier 2 and later) would be required if assignment of relative values and/or priorities of each feature is necessary.

The one-mile buffer zone for protection of raptor nests is based on the professional opinion of UDWR raptor biologists. The one-mile buffer zone for protection of wildlife water holes is also based on professional opinion of UDWR wildlife biologists. The two-mile buffer zone for protection of sage grouse strutting grounds-nesting area is based on considerable research by the Western States Sage Grouse Committee published as, "Guidelines for Maintenance of Sage Grouse Habitats" (Braun et al 1977). Since UDWR previously provided various wildlife distribution maps, only buffer zone areas recommended in this report are shown on the enclosed maps.

We appreciate the opportunity to provide these comments and recommendations. If additional information is needed, please let us know.

Sincerely,

Douglas F. Day
Director

Acting Director

Enclosures

AJJ

JUN 16 1981

SCOTT M. MATHESON
Governor

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

CLEON B. FEIGHT
Director

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
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M E M O R A N D U M

* * * * * * * * * *

TO: Ann Keegan, MX Coordination Office

FROM: Ronald W. Daniels, Deputy Director

SUBJECT: Review and Comment on the Revised MX Weapon System Site Layouts for Pine and Wah Wah Valleys, Utah

DATE: June 10, 1981

The Division has reviewed the two maps which were sent to it as attachments to your May 18, 1981 memo.

We have no comment on this revised site layout at this time.

RWD/btm

DIVISION OF WATER RESOURCES
Empire Building, Suite 300
231 East 400 South
Salt Lake City, Utah 84111

JUN 10 1981

MEMORANDUM

June 3, 1981

TO: Utah MX Coordination Office

FROM: Daniel F. Lawrence

SUBJECT: Comments on the Revised MX Weapon System
Site Layouts for Pine and Wah Wah Valleys, Utah

The proposed MX weapon system site layouts should avoid interferrence with existing water rights and associated facilities. Tabulation summaries of water right filings were provided by the State Engineer to the Utah MX Coordination Office in November, 1980.

We have no additional impacted resources to delineate for these two valleys.

4WW

JUN 1 0 1981

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RIGHTS

DEE C. HANSEN
STATE ENGINEER

EARL M. STAKER
DEPUTY

200 EMPIRE BUILDING
231 EAST 400 SOUTH
SALT LAKE CITY, UTAH 84111
(801) 533-6071

DIRECTING ENGINEERS
HAROLD D. DONALDSON
DONALD C. NORSETH
STANLEY GREEN
ROBERT L. MORGAN

MEMORANDUM

DATE: June 9, 1981

TO: Utah MX Coordination Office

FROM: Dee C. Hansen, State Engineer, Divison of Water Rights By DCH

SUBJECT: Revised MX Weapon System Site Layout for Pine and Wah Wah Valleys, Utah

I have reviewed the revised MX Weapon System site layout for Pine and Wah Wah Valleys. It appears that the proposed revisions will not affect water rights or water resources over that of the previous layout. Therefore, I refer you to my memorandum of November 14, 1980, which addresses this matter.

AMW

JUN 26 1981

Scott M. Matheson
Governor

STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110

Alvin E. Rickers, Director
Room 426 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS
mmunity Health Services
Environmental Health
Family Health Services
Health Care Financing and Standards

OFFICES
Administrative Services
Health Planning and Policy Development
Medical Examiner
State Health Laboratory

June 24, 1981
533-6108

Kenneth C. Olson, Project Manager
Utah MX Coordination Office
448 East 400 South, Suite 103
Salt Lake City, Utah 84111

Re. MX Coordination Office Memorandum of June 17, 1981, requesting delineation of Environmental Resource Constraint Data.

Dear Mr. Olson:

Based on the limited information furnished by your memorandum referenced above, the Bureau of Air Quality is unable to make any kind of Air resource impact evaluation relative to potential MX operational sites.

Detailed site specific emission data for the criteria pollutants will be required before our office can make an intelligent evaluation.

Sincerely,

Robert P. Dalley for

Brent C. Bradford
Director
Bureau of Air Quality

DONALD T. McMILLAN
Director

UTAH GEOLOGICAL AND MINERAL SURVEY
606 BLACK HAWK WAY
SALT LAKE CITY, UTAH 84108
(801) 581-6831

SCOTT M. MATHESON
Governor

GORDON E. HARMSTON
Executive Director
Department of Natural Resources

JUN 29 1981

June 26, 1981

Ms. Ann Keegan
MX Coordination Office
448 East 400 South, Suite 103
Salt Lake City, UT 84111

Dear Ann:

UGMS has no new information that would change our comment of December 3, 1980, on Pine and Wah Wah Valleys. A copy of the December 3 memo is attached. Revising the shelter layouts is of no significance with regard to geology and minerals.

Very truly yours,

Don McMillan

DONALD T. MCMILLAN
Director

DTM/af

999 December 3, 1980

MEMORANDUM

TO: MX Coordination Office

FROM: D. T. McMillan, Director

SUBJECT: MX Constraints - Geology and Minerals

A search of records at Utah Geological and Mineral Survey reveals no information on mineral deposits underlying Pine and Wah Wah Valleys.

Recent discovery of a deeply buried molybdenum-tungsten deposit along the east side of Pine Valley is a strong indication that other valuable mineral deposits, as yet undetected, may underlie these valleys. A well-recognized mineralized belt runs from Pioche, Nevada, to Marysvale, Utah, and crosses both Pine and Wah Wah valleys, making both these valleys much better than average targets for future mineral exploration.

We have no specific information concerning the possible occurrance of oil and gas beneath Pine and Wah Wah valleys.

In general, the committee feels that MX deployment will not greatly affect oil and gaseexploration and development whereas it may rule out some of the geophysical techniques used in mining exploration and will have a detrimental effect on mining exploration and development.

Donald T. McMillan

DTM/ay

ATTACHMENT 9

Letter to Colonel William R. Sims

UTAH MX COORDINATION OFFICE

448 EAST 400 SOUTH, SUITE 103
SALT LAKE CITY, UTAH 84111
Phone (801) 364-9647

SCOTT M. MATHESON
GOVERNOR

KENNETH C. OLSON
PROJECT MANAGER

June 30, 1981

Col William R. Sims
Environmental Planning Division
AFRCE-MX/DEV
Norton AFB, CA 92409

Dear Colonel Sims:

In the course of discussing, with your staff, the consolidated siting review comments of Utah resource management agencies regarding the second iteration of the layout of MX shelters in Pine and Wah Wah Valleys, we have discovered some features of the Air Force's siting process which were not previously known to us. For the first time, we have been told that the second iteration of the shelter layout in Pine and Wah Wah Valleys incorporated no response to State of Utah comments on the first iteration of these layouts. We are told that this is by design. Apparently the Air Force does not intend to revise the layout of any individual valley based upon review comments until all the valleys in the DDA have been initially laid out. Furthermore, it is our understanding that in some fashion, these initial layouts will encompass enough "excess capacity" so that presumably the most sensitive areas within the deployment area might be avoided. Whether or not these understandings are entirely correct remains to be seen. However, there are some important questions which we feel must be addressed at the presently-scheduled July 14th Siting Review Board meeting.

First, we believe that the July 14th siting meeting must focus upon achieving a consensus regarding the process which will be followed in reviewing MX weapon system layouts. This understanding must encompass current Air Force thinking on the timetable for the total layout, how review comments from state and other federal agencies will be handled, the process by which final environmentally-sitable lands will be identified, the "trade-off" process for eliminating some portions of the total layout and related matters. We will be interested in knowing whether or not an area excluded from siting for a 4600 shelter system becomes eligible for reconsideration in the event of system expansion. We will wish to know the weight which will be afforded state review comments and preferences regarding the elimination of siting in the extremely sensitive areas. In short, we wish to understand and work through, in detail, the entire process in a systems sense, prior to embarking further on discussions about how to mitigate impacts in any specific area.

I am sure that you will immediately understand the reasons for this viewpoint. It seems pointless to invest a great deal of effort in developing state review comments without knowing whether or how they will be used. It does not seem useful to attempt to develop mitigation measures for specific areas where layouts may change or where clusters may be eliminated. If state review comments are not to receive serious consideration (which I define as meaning that the review comments have an effect upon outcomes) then there may be some question as to whether or not the siting review process represents a useful form of consultation.

Summing up, the meeting on the 14th must focus upon process, information requirements, timetable, procedures and the like. We will continue to finalize our formal comments on "iteration two" layouts in Pine and Wah Wah Valleys so that our concerns will be a matter of record. However, we believe it would not be helpful to discuss site-specific (Tier III) mitigating measures on July 14th until the entire process is fully understood and agreed to by the parties.

Sincerely,

Kenneth C. Olson
Project Manager

cc: Ralph Starr
Steve Bradhurst

ATTACHMENT 10

Cooperative Agreement Between the Four County Missile Policy Board and the Utah MX Coordination Office

COOPERATIVE AGREEMENT

Between

The Four County Missile Policy Board and the Utah MX Coordination Office

Regarding Contracted Studies

1. This Agreement is entered into on this first day of June, 1981, between the Four County Missile Policy Board, a public agency established pursuant to the Utah Interlocal Cooperation Act, hereinafter known as the "Board"; and the Utah MX Coordination Office, designated as the agent of the State of Utah in dealing with state level MX planning, hereinafter referred to as the "Office".

2. The Board agrees to act as the contracting agent for specific MX related planning studies, jointly supported by the Board and the Office, which will be undertaken utilizing fiscal year 1981 planning funds. This arrangement will permit a single point of contact and supervision in handling MX contracted studies and will simplify contract administration and will lower administrative costs associated with such contracts.

3. The Office agrees to share the costs of these studies and to provide its share of funds to the Board so that contract obligations entered into by the Board for the contracted studies may be met.

4. The studies which will be contracted for by the Board and the sharing of contract costs are as follows:

(1) Fiscal Impact Reconnaissance Study; John M. Sanger Associates, Inc. of San Francisco, California. Total contract: $14,000 Office share: $7,000

(2) Study to design a Multi-Project Management and Accounting System; Peat, Marwick, Mitchell and Co., of Washington, D.C. Total contract: $34,000 Office share: $17,000

(3) Assessment of Governmental Revenue Consequences of MX Deployment in Southwestern Utah; John Short and Associates, Inc. of Salt Lake City, Utah. Total contract: $40,000 Office share: $7,000

(4) Federal Information Acquisition and Dissemination; Mountainwest Associates of Washington, D.C. Total contract: $30,000 Office share: $15,000

Total Office Share: $46,000

5. The Office shall pay to the Board the sum of $46,000 as its share of the studies and services referenced above. These funds shall be paid by the Office to the Board on invoices submitted by the Board as the Board requires funds to make contract payments according to the payment schedules associated with these contracts.

6. All of the projects outlined in this Cooperative Agreement are within the approved fiscal year 1981 work program of the Office.

MX Missile Policy Board
Chad Johnson, Chairman

Utah MX Coordination Office
Kenneth C. Olson, Project Director

ATTACHMENT 11

1982 Budget Requirements for Planning and Impact Mitigation

STATE OF UTAH - MX COORDINATION OFFICE

PROPOSED

FISCAL YEAR 1982 BUDGET REQUIREMENTS FOR

PLANNING AND IMPACT MITIGATION

SUMMARY DETAIL

I.	IMPACT ASSESSMENT AND MITIGATION PLANNING		
	A. MX Coordination Office - Direct		
	1. Personnel (including fringe benefits) - 5 professional staff, 3.5 support persons, overhead costs	$276,000	
	2. Travel	50,000	
	3. Operating Expenses (includes office and equipment rental, supplies, copying, telephone, postage, etc.)	78,000	
	4. Administrative Fees	46,000	
	TOTAL STATE MX COORDINATION OFFICE		$450,000
	B. State Agency Support		
	Impact Analyses, Coordination, Planning for Services, Facilities and Impact Mitigation (see attached detail)		740,000
	C. Consultant Services		
	1. Fiscal Impact Study (state share)	50,000	
	2. Grants Management Study (state share)	50,000	
	3. Tax Implications Study (state share)	25,000	
	4. Federal Information Coordination (state share)	50,000	
	5. Miscellaneous Short-Term Consultants	35,000	
	TOTAL CONSULTANT SERVICES		$210,000
	TOTAL STATE PLANNING AND COORDINATION		$1,400,000

II. IMPACT MITIGATION

During Fiscal Year 1982, all anticipated impacts will be on highways and roads. In order to meet the long lead times to provide an adequate transportation system, pre-construction engineering and design work will be undertaken to prepare to let bids for construction and upgrading of roads.

A. Utah Department of Transportation - Pre-construction Engineering and Design	$3,403,000*
B. County Road Upgrading and Repair	
Allocated as Required	240,000
TOTAL IMPACT MITIGATION	$3,643,000

* This amount of engineering design and pre-construction work could result in the obligation of up to $6.5 million of construction in FY 83.

SUMMARY DETAIL OF STATE AGENCY IMPACT MITIGATION PLANNING

ACTIVITIES RELATIVE TO MX FOR FISCAL YEAR 1982

I. Department of Natural Resources — $164,000

This item will cover development of wildlife impact analysis and mitigation plan development, investigation and processing of USAF water right applications, water resources planning, state land impact analysis and permitting and minerals and other geologic impact analysis.

II. Department of Employment Security — 95,000

This item will cover a thorough regional analysis of labor supply information relating to MX construction impacts and operational requirements. It will tie to a Nevada Labor Demand Study.

III. Department of Health — 90,000

This item will cover impact analysis and development of environmental health impact mitigation plans focusing upon sewer and water systems, and development of health care services and facilities plans.

IV. Department of Community and Economic Development — 88,000

This item will cover cultural resources impact analysis and mitigation, development of housing strategies, and development of an MX induced economic development plan.

V. State Planning Coordinator's Office — 71,000

This item will cover development of demographic and economic impact projections and analysis.

VI. Department of Social Services — 50,000

This item will include impact analysis and mitigation plans for all social services including public assistance, substance abuse, child welfare, services to the aging, etc.

VII. State Budget Office — 32,000

This item will include all state agency budget impact analysis and integration of MX community facilities plans with overall state capital improvement plans.

VIII. Department of Business Regulation — 30,000

This item will include impact analysis and mitigation plans relative to electrical transmission systems and rate impact analysis regarding electricity.

IX. Department of Agriculture — 28,000

This item will include impact analysis and development of mitigation plans for ranching and farming activities.

X. State Board of Regents — 17,000

This item will cover impact analysis and development of plans for utilization of vocational technical facilities to train for MX related occupations.

XI. Other State Agency Functional Service Plans — 75,000

This item will cover unanticipated study areas which may arise during the fiscal year.

TOTAL STATE AGENCY IMPACT MITIGATION PLANNING — $740,000