APPENDIX G
COMMENTS AND RESPONSES

COMMENTS AND RESPONSES

This appendix contains comments received from federal, state, and local agencies and the general public during the 30-day comment period (August 1 through August 31, 2000) for the Draft Environmental Assessment (EA). The comment period provided agencies and members of the public with an opportunity to evaluate the proposal and the analyses contained in the Draft EA. The Final EA incorporates comments received on the Draft EA. Public and agency comments are used by the Air Force while evaluating project alternatives.

Comment Receipt and Review

Comments on the Draft EA were generated through written correspondence during the comment period. All comment letters received during the 30-day period are included in the *Comments* section of this appendix.

The following process was used for reviewing and responding to comments.

- Each comment letter was reviewed carefully and assigned a unique number.
- Within each comment letter, substantive comments were identified and bracketed. Three guidelines were used for determining substantive comments:
  1. The comment questioned the proposed action, alternatives, or other components of the proposal.
  2. The methodology of the analysis or results was questioned.
  3. The use, adequacy, and/or accuracy of data were questioned.
- The bracketed comments were reviewed by environmental resource specialists and provided a response. In some cases, similar comments were assigned the same response.
- The bracketed comments each were assigned a response code organized according to environmental resources addressed in the Draft EA:

AI = Airspace	MM = Materials Management
BI = Biological Resources	PH = Physical Resources
CU = Cultural Resources	PN = Purpose and Need for the Proposed Action
DO = Description of the Proposed Action and Alternatives	SA = Safety
LU = Land Use	

The responses to comments appear in the *Response* section of this appendix.

COMMENTS

000001

16 August, 2001

Ms. Linda DeVine
Chief, Environmental Analysis
Dept. of Air Force
Headquarters Air Combat Command
129 Andrews St., Suite 102
Langley AFB, VA 23665-2769

Dear Ms. DeVine:

TH-1

I am writing in response to receiving and reviewing Draft Environment Assessment for the Defensive Training Initiative, Cannon Air Force Base, New Mexico.

First, I make the following general comments about the proposed Defensive Training Initiative which will impact a large region including several counties and communities in east-central New Mexico, including DeBaca and Fort Sumner. I and another historian have recently published an environmental history for much of the area-middle Pecos Basin – in which we document the severe degradation of ecosystems from 1862 (founding of Fort Sumner) to the present. The quality and quantity of surface and ground waters, soils, flora, and fauna have declined over the last 139 years, and the Air Force's proposal to expand the range of aircraft using chaff and flares would further contribute to the degradation of these resources, the agricultural industry, and the general quality of life for the region.

I question the need to increase the training of pilots in the use of chaff and flares given the overall success of American aircraft bombing Iraq during the Gulf War and Kosovo in more recent years with very minimal loss of pilots and aircraft. As I recall, only two aircraft were lost among many thousands of sorties flown during these two conflicts. PN-1

Third, with 40 years of experience in observing and researching environmental impacts in the Southwest and across the U.S., I know we cannot always foresee the consequences of our activities. Two examples are global warming and thinning of the ozone layer. Do we really know the consequences, short-term or long-term, of dropping chaff and high intensity flares? I don't think so. DO-1

Also, I question the stated impact of billons of strands of aluminum-coated silica fibers and the thousand of two 1-inch squares by 1/8–inch thick pieces of plastic and felt spacers on wildlife and livestock. In the Draft EA, on p. 2-14 it is stated that the environmental effects of chaff material are unknown. The magnesium pellets felt spacers and plastic end caps of the flares also pose a threat to wild and domestic fauna. Dud flares falling to the ground add to my concern for fires and injury to humans and property. DO-6 BI-1 SA-1

The 4,698 annual sorties (13/day) of the Pecos MOA are unacceptable due to jet noise and emissions, especially over the community and valley of Fort Sumner. What does the statement "populated areas... are avoided to the maximum extent possible" mean (p 3-33)? Surely these two locations could be avoided by jet overflights, but at present they are not. AI-1

There is no discussion of the impacts on critical ground-nesting bird species such as the rare (but once common) lesser prairie chicken. This species and migratory or wintering species, such as the bald eagle and Southwestern flycatcher, should be protected from overflights and the dropping of chaff and flares. As stated in the U.S. Fish and Wildlife letter at the end of the Draft EA, adverse effects on wildlife have not been thoroughly addressed. BI-2

The likelihood of fires and human injury or death due to falling flares is an unacceptable risk. Is the risk of a U.S. Air Force pilot being shot down due to lack of flare training over the proposed DTI region more or less that of civilian injury/death resulting from chaff flare drops? SA-2

As for cultural resources, the Fort Sumner/ Bosque Redondo historical sites are special, and therefore over flights and the dropping of chaff/flares in the area should be banned. CU-1

Another site of potential cultural resource concern is a "sacred eastern landmark" for Navajos incarcerated on the Bosque Redondo Reservation, 1863-68. This site was reported and visited by an elderly Navajo woman, with a party of other Navajos, according to a local historian, who accompanied them there. An investigation of this sacred landmark should be made and appropriate action possibly taken to protect it. CU-2

In summary, I cannot support the Air Forces proposed Defensive Training Initiative for the above stated reasons. Continuing to increase environmental impacts at such a critical time (global warming, declining quality of life, exterminating species, etc.) borders on stupidity, if not insanity. Our outlook is distorted and our wisdom less than it should be.

Sincerely,

Dan Scurlock
Environmental Historian,
Archeologist, Naturalist

Copies: Senator Jeff Bingaman
Senator Pete Domenici
Representative Joe Skeen
State Representative Brian Moore

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE VIRGINIA

000002

31 JUL 2001

RECEIVED
AUG - 1 2001
PAY
HISTORIC PRESERVATION DIVISION

MEMORANDUM FOR Director, Historic Preservation Division (Elmo Baca)
New Mexico Office of Cultural Affairs
228 East Palace Ave
Santa Fe NM 87501

62817

FROM: HQ ACC/CEVP
129 Andrews Street, Suite 102
Langley AFB VA 23665-2769

SUBJECT: Defensive Training Initiative (DTI) for Cannon Air Force Base (AFB), New Mexico

TH-1

1. We are pleased to provide you with the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed Defensive Training Initiative. This EA analyzes impacts from the proposed use of training chaff and flares in the airspace currently used and managed by Cannon AFB (Restricted Areas 5104/5105; Tiaban and Pecos Military Operating Areas; Pecos and Sumner Air Traffic Control Assigned Airspace). In addition, the use of chaff only is analyzed for use in the northern portions of Military Training Routes Visual Routes 100/125. This action would substantially improve the readiness of Cannon AFB pilots by supporting pilot training in the art of simultaneously dispensing chaff and flares as defensive countermeasures against simulated enemy threats during a combination of defensive maneuvers.

Request your concurrence with the Air Force's conclusion of no significant effects to cultural resources. The 30-day comment period for this action is 1-31 August 2001. Please provide responses and direct inquiries on this matter to Ms. Linda DeVine, HQ ACC/CEVP, EIAP Project Manager, 129 Andrews Street, Suite 102, Langley AFB VA 23665-2769. Ms DeVine may be reached at (757) 764-9434.

Alton Chavis
ALTON CHAVIS
Chief, Environmental Analysis Branch

Attachment
Draft EA

THIS UNDERTAKING WILL NOT HAVE AN ADVERSE EFFECT ON REGISTERED OR ELIGIBLE PROPERTIES.
P. G. Young 08/20/01
for NM STATE HISTORIC PRESERVATION OFFICER
By the avoidance of overflights over the properties listed on Table 3.7-1 on page 3-27

CU-3

Global Power For America

000003

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

IN REPLY REFER TO:
1610(06000)

Ms. Linda DeVine
Headquarters Air Combat Command/CEVP
129 Andrews Street, Suite 102
Langley AFB, VA 23665-2769

AUG 23 2001

Dear Ms. DeVine:

TH-1

We have received and reviewed the Draft Environmental Assessment for the Defensive Training Initiative for Cannon Air Force Base in New Mexico. With regards to the possibility of fires resulting from the use of flares, we have some suggestions that may be of help to you.

On pare 2-2 the document states "Flares would not be used at all under high fire conditions or above as defined by the National Interagency Fire Center." NIFC, itself does not define the fire danger. To be more accurate this office suggests changing the wording of this statement to read "as defined by the National Weather Service using the National Fire Danger Rating System." NFDRS indices are used by all federal and state agencies involved in wildland fires and would provide fire weather information and forecast informing you of fire weather conditions in which flares should not be used during a training exercise.

SA-3

On page 3-5 the document discusses fire safety and managing the risk of fires occurring when using flares. The document states that "the risk of fire is managed by, among other things, suspending the use of heat and spark-producing ordnance when the fire risk is elevated." We suggest tying this statement back to the daily fire weather forecast and to the NFDRS indices as developed in that forecast. The NFDRS indices would provide good guidance to operational personnel on the severity of fire weather conditions in the operating area.

SA-4

We have no other suggestions or comments regarding this Draft EA. Thank you for including the Roswell Field Office for the opportunity to review and comment.

Sincerely,

Edwin L. Roberson

Edwin L. Roberson
Field Manager

000004

August 31, 2001

HQ ACC/CEVP
Defensive Training Initiative EA
129 Andrews Street, Suite 102
Langley AFB VA 23665-2769

Attention: Linda DeVine

TH-1

I have read through the Draft Defensive Training Initiative Environmental Assessment for Cannon AFB which you kindly sent to me regarding the findings of the task force concerning expanding the chaff and flare training activities over a sensitive, fragile wilderness area of New Mexico.

I was not surprised but dismayed to see the findings of "no significant impact" when it is clear from the letters enclosed from ranchers and farmers who live in this area that they strongly feel there would be significant impact, certainly, upon the quality of their lives, upon the land and the animals—not only from the increased low-and high-altitude flyovers but furthermore from the trash and incendiary devices being carelessly dumped on their property and on open land. LU-1

Considering, especially, the huge problem with fire in the West it would seem to be extremely negligent to be dropping flares which burn at 2000 degrees F over a fragile rangeland. How could such a practice be allowed under any circumstances? SA-5

As for the chaff – Clearly this material is NOT harmless, to animals or humans, and I am appalled that our beautiful open spaces are nothing but an invitation to practice wargames and destruction by spreading toxic trash indiscriminately in the atmosphere. BI-1 SA-6

The Air Force already has sufficient space to train pilots, and we in New Mexico do not want our airspace become a bombing target for these wasteful and dangerous games. PN-1

I ask you to reconsider Alternative C - No Action.

Linda W. Lupowitz
PO Box 2075
Corrales NM 87048

000005

A. S. ELLIOTT
GOTTOMITEE, LTD.
P. O. BOX 58
FORT SUMNER, NEW MEXICO

29 AUG 2001

Mailed Via ~~FEDERAL~~ ~~EXPRESS~~ UPS

Ms. Linda DeVine
HQ ACC/CEVP
129 Andrews Street, Suite 102
Langley AFB VA 23665-2769

TH-1

Re: Answer to Draft EA for DTI Cannon AFB, Clovis, New Mexico

I will follow your order of presentation.

FINDING OF NO SIGNIFICANT IMPACT

PH 3.0, SUMMARY, Safety: When is there not a high fire risk in Eastern New Mexico? — SA-7

Physical Resources:"No anticipated impacts from chaff... would occur." You just don't know for sure. — PH-1

Biological Resources:All fires are not "natural", many are railroad and highway related. — SA-8

Land Use and Visual Resources: Have you asked the farmers and ranchers upon whose land your trash will fall if their property values will be impacted? Yes, they will! — LU-2

PH 4.0, CONCLUSION: Because you substantiate FONSI with doubt, anticipation and mis-statements of truth or outright lies, an ENVIRONMENTAL IMPACT STATEMENT should be required. — DO-1

PURPOSE AND NEED FOR THE PROPOSED ACTION

PH 1.2.5: Our property is enclosed, triangulated, by three emitter sites deployed under the MOA; many violations. — GE-1

PH 2.2.5, Table 2-3: Table is false as flare usage has occurred outside Melrose Range, confirmed by "source" Mr. Schuler, Cannon AFB Airspace Manager at meeting 16 SEP 2000, note and photo (yes, we have to photograph violations to be "believed") enclosed. — GE-1

PH 2.2.6: Other USAF and ANG agencies do not read charts, (the B1-B ANG unit from Kansas 2-3 months ago) or are inept as the NMANG, "The Tacos", took 27 months to "chart" the expanded NSA by Cannon AFB, JAN 1996. Consequently, violations, aggravation, inconvenience and damage claims occur. — GE-1

PH 2.7: FAR violations are "explained away" after four different attempts and by the final classic statement by COL Jeffrey Remington, COM, 27FW, at our meeting 16SEP00, "...that USAF F-16 avionics could be ten miles off" in recording the data tape for record of the sorty. Please identify your "BLUE RIBBON PANEL". GE-1 GE-2

TABLE 2-8: Where is the Environmental Justice in our range lands being continuously condemned for the military mission? Can't the city folk enjoy your continued assault on our rights? Note US Senator Bingaman's, letter 4NOV98 regarding the two FAR violations JUL98 over me at home. Where in our Constitution does it say I must accommodate your mission? Since that incident I've had two more violations resulting in damage claims. Where is the sincerity? We still pick up military "mission trash" after 60 years of accommodating our nation when our family ranch was condemned for WWII aerial gunnery practice out of Laredo AFB, Laredo, Texas, and subsequent training by the 149FG, the Texas ANG, and Navy aircraft depositing drop tanks on the ranch. Who cares? We do. EJ-1

PH 3.1.1: Too many incidents from inept or inconsiderate flybys over property resulting in violations of FARs and NSA. Several months ago, within a week or two, Cannon AFB violated my NSA twice, Tacos once, with damage, and Kansas guard unit once because they don't comply.

PH 4.5.3.1: We "hayseeds" down on the farms and ranches depend on the profitability of crop and grass production by minimizing or eliminating "blown dust". For you to achieve FONSI by assuming this is very optimistic. Your trash will remain for several generations. PH-2

Surface Water: Chaff deposited in water "...would most likely produce no measurable effect." Again, an estimate to achieve FONSI. PH-1

PH 4.6.2 Fire Potential: "...manmade fires that regularly sweep through the area." conflicts with PH 4.6.3.1, 5th paragraph, page 4-17, "...The vegetation and species... recover from infrequent fires." Which is it? One or the other? Area native grasses require 3-5+ years to recover under average rainfall which has been sparse for three years now. Range recovery requires removal of grazing livestock for timely recovery and thus reduces our ability to increase our profit, our "mission". BI-6

PH 4.7.2, 4.7.3.2: 1564.75 Plastic end caps would be deposited annually on our lands by your figures. Yes, it will accumulate. LU-2

000005

PH 4.8.3.1: You just don't know how property values would be compromised. LU-3

In conclusion, this action constitutes condemnation of my private property for sake of USAF mission. Your admitted statements that end cap trash will occur constitutes littering, a detriment to our private property rights still protected by our United States Constitution. LU-5

Our ranch partnership is initiating programs to provide recreational activities to supplement our ranch income. We do not need additional and ever continuing violations, aggravation, and disturbance to our potential guests and paying for profit customers (FYI: www.iwannabeacowboy.com). LU-4

Your assumptions and conflicting uneducated statements support the need for an EIS or withdrawal from implementation. Your FONSI is based on too many assumptions and ignorance of the feelings of the public on the ground dependent on their uninterrupted use without litter and enjoyment of their private lands. I am against the implementation of this Environmental Assessment to facilitate Finding Of No Significant Impact so that you can improve your training over private property. DO-1

Sincerely,

A. S. Elliott ((also D.(sic) S. Elliott))

Gottomitee, Ltd.
HCR 32, Box 25
Uvalde, Texas 78801-9700

El Bigote Cattle Co..
P. O. Box 58
Fort Sumner, NM 88119

encls

USAFDTI.doc

000005

MEETING ON MONDAY 16 SEP 00

AT CANNON AFB, NM

CAPT SUSAN A ROMANO
27 FW PUBLIC AFFAIRS

☆ COL JEFFREY A REMINGTON
27 FW COMMANDER

COL DAN RUNYAN
27 FW VICE COMMANDER

COL JAY LINDELL
27 FW OPERATIONS GROUP COMMANDER

> LT COL JOSEPH MILLER
27 FW JUDGE ADVOCATE GENERAL

CAPT DON SHARER
27 FW WING EXECUTIVE OFFICER

MR JOHN SCHULLER
27 FW AIRFIELD OPERATIONS MGR
"AIRSPACE MGR." RETIRED F-111 AF PILOT...
MET HIM PREVIOUSLY IN
EARLY 1980's WHILE HE
WAS AT CAFB

9/99 15:05

NGAMAN
MEXICO

000005

IN NEW MEXICO
TDD (202) 224-1792
senator_bingaman@bingaman.senate.gov

United States Senate

	Action	Info
DS	FOR	X
OG		X
LG		
SPTG		
MOG		
SE		X
SUSPENSE FW / CC		

November 4, 1998

CC ✓
CV ORF
CCE
CCC

Colonel David E. Clary
Commander
27th Fighter Wing
Cannon Air Force Base
CAFB, New Mexico 88103

Dear COL Clary:

Thank you for your response to my August 13, 1998 letter regarding aircraft activity above Mr. A. S. "Tex" Elliott's ranch in the Fort Sumner area. Mr. Elliott had complained to me that the Air Force was not living up to its 1996 agreement with him.

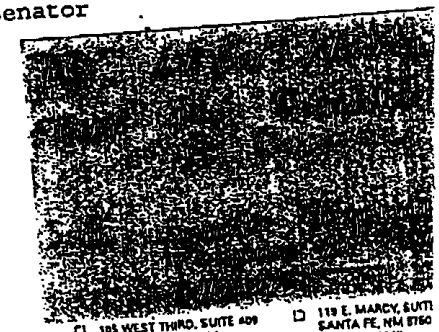
From your explanations and other documentation you sent, I must conclude that Mr. Elliott is receiving more than normal consideration from the Air Force. It is also apparent that it is difficult to judge without instruments the actual height and distance of an aircraft flying at high speed. I am satisfied that the Air Force is operating in compliance with the 1996 agreement. Indeed Mr. Elliott may never be able to make a reasonable accommodation to the vital mission of the Air Force.

Again, thank you for taking the time and trouble to go over this issue once more.

Sincerely,

Jeff Bingaman
United States Senator

JB/ram



PLEASE REPLY TO:

☐ 625 SILVER AVE., SW, SUITE 130
ALBUQUERQUE, NM 87102
(505) 346-6601

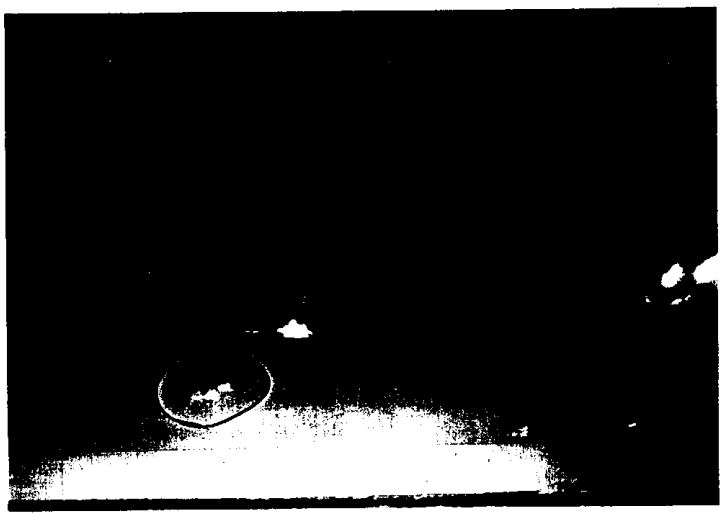
☐ 148 LORETTO TOWNE CENTRE
505 SOUTH MAIN
LAS CRUCES, NM 88001
(505) 523-6561

☐ P.O. BOX 1977
118 BRIDGE STREET, SUITE 3
LAS VEGAS, NM 87701
(505) 454-8824

☐ 105 WEST THIRD, SUITE 409
ROSWELL, NM 88201
(505) 622-7113

☐ 119 E. MARCY, SUITE
SANTA FE, NM 8750
(505) 988-6647

C00005



DATE NOT RECORDED

GOVERNOR
Gary E. Johnson

DIRECTOR AND SECRETARY
TO THE COMMISSION
Larry G. Bell

000006

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH
P.O. Box 25112
Santa Fe, NM 87504

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For basic information or to order free publication: 1-800-862-9310

September 5, 2001

Ms. Linda Devine
Headquarters Air Combat Command/CEVP
129 Andrews Street, Suite 102
Langley AFB VA 23665-2769

Re: Defensive Training Initiative Draft Environmental Assessment
NMGF Doc. No. 7615

Dear Ms. Devine:

TH-1

The New Mexico Department of Game and Fish (Department) has reviewed the Defensive Training Initiative Draft Environmental Assessment (EA), which proposes to allow F-16 aircraft based at Cannon Air Force Base to disperse aluminized fiberglass chaff and flares for defense training in portions of Chaves, Curry, DeBaca, Guadalupe, Lincoln, Quay, Roosevelt, San Miguel and Torrance Counties, within existing New Mexico military airspace.

The Department has no specific concerns with the proposed 16-fold increase in flare use. However, the proposed 13-fold increase in chaff use across an area much larger than is currently used (restricted airspace over Melrose Air Force Range) is of more concern, particularly regarding potential effects to aquatic habitats. BI-3

According to page 2-1 of the EA, modern training chaff (type RR-188) consists of bundles of extremely small strands of aluminum-coated silica fibers. Chaff fibers are approximately the thickness of a very thin human hair and range in length from 0.3 to 1.0 inches. Strands are constructed as small and light as possible to remain in the air long enough to confuse enemy radar.

Although the EA states that under either action alternative, the effects of chaff on biological resources will be "undetectable and biologically insignificant", past research suggests the possibility of adverse impacts to wildlife and habitats, depending on the concentration of chaff deposited, the pre-existing soil and water conditions (such as pH), and the sensitivity of particular species and habitats to contaminants. BI-4 The September 1998 U. S. General Accounting Office (GAO) report "DOD Management Issues Related to Chaff" states that the Department of Defense and other organizations have cited potential adverse effects of chaff on biological and environmental health. For example, a 1989 U.S. Air Force report found that chaff could modify water quality in aquatic habitats, and/or potentially impact wildlife through ingestion, inhalation, or skin contact, depending on exposure rates. BI-4

The project proposes to release chaff from as low as 500 feet above ground level (AGL), which would concentrate the chaff significantly more than releases at higher altitudes. The proposed project area includes Santa Rosa and Fort Sumner Reservoirs, portions of the Pecos River and numerous playas. However, no mention is made within the EA of avoiding these aquatic habitats during chaff release. DO-2 BI-5

Additionally, no information is provided in the EA regarding how long this project and associated chaff dispersal will continue. Therefore, the cumulative effects analysis appears to be inadequate because it does not consider dispersal of thirteen times the baseline amount of chaff over a much larger area, for any predetermined amount of time. According to Table 2-5, the preferred Alternative A proposes to dispense a total of 60,770 chaff bundles per year. With approximately 5 million chaff strands per bundle, more than 300 billion chaff particles will be dispersed across the landscape per year. DO-3 DO-4

In summary, at this point the Department does not concur that this project will not have adverse effects on sensitive wildlife or habitats without the following additional information: 1) proposed project time period; 2) a cumulative effects analysis based on a defined time period; and 3) information regarding if efforts will be made to avoid the sensitive aquatic habitats mentioned above. DO-3 DO-4 BI-3

We appreciate the opportunity to comment on this project. Should you have any questions regarding our comments, please contact Mark Watson, Habitat Specialist, of my staff at 476-8115.

Sincerely,

Bill C. Hays for

Tod W. Stevenson, Chief
Conservation Services Division

TWS/MLW

CC: Joy Nicholopoulos (Ecological Services Field Supervisor, USFWS)
Scott Brown (Assistant Director, NMGF)
Bill Hays (Conservation Services Asst. Div. Chief, NMGF)
Alexa Sandoval (Southeast Area Habitat Specialist, NMGF)
Clint Henson (Northeast Area Habitat Specialist, NMGF)
Mark Watson (Conservation Services Habitat Specialist, NMGF)

000007

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855
Fax (505) 827-2836

GARY E. JOHNSON
GOVERNOR

PETER MAGGIORE
SECRETARY

PAUL R. RITZMA
DEPUTY SECRETARY

September 5, 2001

Linda DeVine
Headquarters Air Combat Command/CEVP
129 Andrews Street
Suite 102
Langley AFB
VA 23665-2769

Dear Ms. DeVine:

TH-1

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR CANNON AIR FORCE BASE'S (AFB), NEW MEXICO, DEFENSIVE TRAINING INITIATIVE, GEORGIA (STATE CLEARINGHOUSE #FL9909080744C)

This transmits New Mexico Environment Department (NMED) staff comments concerning the above-referenced Draft Environmental Assessment (DEA).

SURFACE WATER QUALITY

The U.S. Environmental Protection Agency (USEPA) may require National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-sector General Permit (see Federal Register/Vol. 65, No. 210/Monday, October 30, 2000) coverage for this type of facility. Waste deposition areas, soil remediation activities, etc. likely qualify as potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from activities that meet the USEPA definition of "industrial activities" under Sector K and/or L. PH-3

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained to prevent, to the extent practicable, pollutants in storm water runoff from entering waters of the U.S. PH-3

AIR QUALITY

The proposed implementation of the Defensive Training Initiative for Cannon Air Force Base (AFB) New Mexico does not conflict with New Mexico's laws and regulations pertaining to air quality.

The special use airspace includes the Pecos Military Operations Area (MOA)/Air Traffic Control Assigned Airspace (ATCAA), Sumner ATCAA, Taiban MOA, Restricted areas (R-5104/5105),

and the northern part of Military Training Routes (MTRs) Visual Routes (VRs)-100/125. These areas are currently in attainment for all national ambient air quality standards (NAAQS).

These activities are exempt from New Mexico air quality permitting requirements in accordance with 20.2.72.202 NMAC, which states:

> *Government military activities such as field exercises, explosions, weapons testing and demolition to the extent that such activities (a) do not result in visible emissions entering publicly accessible areas; or are not subject to NSPS (New Source Performance Standards) or NESHAP (National Emissions Standards for Hazardous Air Pollutants).*

Air quality impacts from ground disturbances during the training exercises are not described and should be discussed along with any mitigating measures for additional dust impacts. Military personnel are requested to take care that wind blown dust from military activities does not obscure visibility on roadways adjacent to the project activities. DO-5

HAZARDOUS WASTE

The Department's Hazardous Waste Bureau (HWB) staff has a number of comments on the DEA with respect to requirements or conflicts with NMED-related laws and regulations.

1. The DEA fails to discuss the applicability of RCRA, the HWA, and the CAFB's Operating Permit at Melrose Air Force Range to their proposed actions. Appendix D lists several Federal statutes and regulations, but does not list any New Mexico statutes or regulations, nor does the DEA address CAFB's hazardous waste permit for the Melrose Air Force Range. NMED regulations that CAFB is potentially subject to include, but are not limited to: the Hazardous Waste Act, the Hazardous Waste Management Regulations, the Solid Waste Management Regulations, and the Water Quality Control Commission Regulations. MM-1

2. Flares and chaff appear to "military munitions", as defined in 20.4.1.100 NMAC, incorporating 40 CFR 260.10 (Definitions). According to 20.4.1.700 NMAC, incorporating 40 CFR 266.202(d), military munitions are at least solid waste and "...therefore, is potentially subject to RCRA corrective action authorities under sections 3004(u) and (v), and 3008(h), or imminent and substantial endangerment authorities under section 7003, if the munition lands off-range and is not promptly rendered safe and/or retrieved. Any imminent and substantial threats associated with any remaining material must be addressed. If remedial action is infeasible, the operator of the range must maintain a record of the event for as long as any threat remains. The record must include the type of munition and its location (to the extent the location is known)." MM-2

3. The DEA should address the CAFB's regulatory obligations under the above noted regulations and should specifically discuss the regulatory status of discarded military munition components that land off-range from Melrose Air Force Range. MM-2

4. Although the DEA indicates that chaff and flares do not contain listed hazardous constituents, one of the constituents (potassium perchlorate) could potentially pose a risk to human health in sufficient concentrations. BI-7

5. Other risks that appear to be of concern to the general public include the risk of fire and the ingestion of chaff and/or flare components by cattle. The DEA should more completely address the results of the studies conducted on the ingestion effects of chaff on animals. On BI-8

page 4-16 the document states that cattle and goats avoided eating chaff, but does not discuss what happens when cattle and goats actually consumed chaff with their feed. The DEA should either incorporate the toxicological study or more completely address the results of the study. BI-8

One of the attached letters (from Bill and Peggy Haverlah) indicates that the Air Force has stated in some forum that "...prolonged inhalation of chaff fibers cause respiratory inflammatory response." CAFB should address all potential pathways to the environment including ingestion, inhalation, dermal contact, etc. BI-9

We appreciate the opportunity to comment on this document.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 1489ER

RESPONSES

Responses to Comments

Responses to comment letters are organized by letter number, response number, and response. Numbered letters are contained in the preceding section entitled *Comment Letters.*

Letter Number	***Response Number***	***Response***
0001	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0001	PN-1	Enhanced training in defensive countermeasures is necessary to prepare Air Force pilots to respond to increasingly sophisticated equipment and tactics employed by adversaries (EA section 1.3). To be effective, the 27 FW F-16 pilots must train under conditions that replicate combat conditions to the greatest extent possible. No new military airspace would be developed under the proposed action; only existing airspace would be used. (EA section 1.1)
0001	DO-1	This EA analyzes the consequences of chaff and flare use using the most current and best available scientific data at present (e.g. Air Force 1997a; Spargo 1999; Cook 2001). NEPA and CEQ regulations require the use of the best available information at the time the action is proposed. The EA fulfills that requirement. There have been no consequences defined by resource area.
0001	DO-6	The comment refers to a statement in the EA that addresses prototype biodegradable chaff, which is only in its developmental stages, and is not currently proposed for use.
0001	BI-1	Because of the benign nature of chaff constituent materials, and the amounts of chaff to be dispensed, effects on animals and humans are not expected to be biologically significant (EA section 4.6.2). Section 2.1.1 and Appendices A and B describe components of chaff and flares. Plastic end caps and felt spacers of both chaff and flares are less than one-half of one ounce in weight and would not cause injury to wild or domestic fauna due to direct impact (EA section 4.2.3.1). As stated in section 4.5.3.1, plastic end caps (and felt spacers) are chemically inert and non-toxic. In more than 15 years of chaff and flare use over areas used for cattle grazing at Melrose Range, there have been no cases reported of ingestion of residual components.
0001	SA-1	Based on the population density under the airspace, the possibility of a person being struck by a dud flare would be one in 850 million. For comparison purposes, the probability of being struck by lightning in New Mexico between 1959 and 1993 was approximately one in 15,200 (Los Alamos National Laboratory 2001). This suggests that the probability of being struck by lightning would be approximately 50,000 times greater than the probability of being struck by a dud flare (EA section 4.2.3.2).

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0001	AI-1	Military planners try to align military training so that disturbances to people, property, and other potentially sensitive land areas are minimized (EA section 3.1). DoD flight publications identify specific locations that must be avoided by established horizontal and vertical distances. The Fort Sumner/Santa Rosa area is part of an existing avoidance area for Air Force overflights. No change in sortie-operations is proposed as part of this action.
0001	BI-2	The lesser prairie chicken (*Tympanuchus pallidicinctus*) is considered a candidate for listing by the USFWS and a sensitive species by New Mexico, the US Forest Service Region 2, and the BLM New Mexico State Office. Within the region of influence for the proposed project, the species currently or historically occurs in prairie or shrubsteppe habitat (NMGF 2001) within Chaves, Curry, De Baca, Guadalupe, Quay, and Roosevelt counties (USFWS 2001). The effects of chaff and flare use on any wildlife species, including special status species such as lesser prairie chickens, bald eagles, and southwestern willow flycatchers, would not be biologically significant under any alternative (EA section 4.6.3). See also EA section 3.6.2.3.
0001	SA-2	Military personnel are subjected to life-threatening conditions on a daily basis while deployed. These include increasingly sophisticated hostile, and life-threatening attacks. Training in the use of defensive countermeasures is critical to reduce the potential of the loss of a pilot's life during armed conflicts. (EA Sections 1.1 and 1.2.3).
0001	CU-1	The significance of the Fort Sumner/Bosque Redondo historical sites is described in EA sections 3.7.2.1, 3.7.2.2, and 3.7.2.3. The Fort Sumner/Santa Rosa area is part of an existing avoidance area for Air Force overflights.
0001	CU-2	The Bosque Redondo site is managed by the State of New Mexico. As indicated in section 5.1, construction of a memorial at the site is planned.
0002	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0002	CU-3	Existing avoidance areas for Air Force overflights include the Fort Sumner/Santa Rosa area, the Puerto de Luna area along the Pecos River, and the Montoya area. All aircrews adhere to FAA avoidance rules that specify that aircraft must avoid congested areas of a city, town, settlement or any open-air assembly of persons by 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. Outside of congested areas, aircraft must avoid any person, vessel, vehicle, or structure by 500 feet. In addition, Air Force restrictions on chaff and flares require a minimum release altitude of 2,000 feet for flares and 500 feet for chaff.

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0003	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0003	SA-3	The text in section 2.1.1.2 has been changed to reflect this comment.
0003	SA-4	Under the Proposed Action, Cannon AFB would suspend deployment of flares when the fire danger is high or above (EA section 4.2.3.1). At Melrose AFR, operations are limited when the Range Control Officer determines that conditions pose a threat that cannot be contained by existing fire breaks and on-site fire-spotting and fire suppression personnel and equipment.
0004	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0004	LU-1	Defensive training would not change the use of Cannon AFB airspace in terms of numbers of aircraft overflights (EA section 2.2.6). The potential for residual materials associated with chaff and flare use to affect animals, property, or land use is considered unlikely (EA section 4.8.3). The risk of fire from flares is extremely low when compared to other potential sources of fire such as lightning or campfires (EA section 4.2.3.1). As indicated in EA section 4.8, existing quality of life should not significantly change due to the proposed action or alternatives.
0004	SA-5	Flare use would be limited to altitudes above 2,000 feet AGL providing a 1,675-foot buffer to ensure that burning flares would not reach the ground. Flares operate for only 3.5 to 5 seconds and there have been no recorded instances of a slow burning flare or one that caught fire after initial ejection from the aircraft. (EA section 4.2.3.1).
0004	BI-1	See response BI-1 in letter #0001.
0004	SA-6	Chaff composition is similar to desert dust. There are no data that indicate that the chaff, proposed for release would be toxic to humans, animals, or plant life (EA section 4.3.3.1).
0004	PN-1	See response PN-1 under letter #0001.
0005	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0005	SA-7	The U.S. Forest Service identifies the fire danger daily according to one of five categories ranging from low to extreme fire hazard (EA section 3.2.2.1). These categories are generated for an area by analyzing vegetation types, temperature, precipitation, fuel moisture, humidity, wind lightening activity and human factors.

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0005	PH-1	The analysis presented in the EA is representative of the best available scientific data regarding the effects of chaff and flares on soil and water (Air Force 1997a). Due to the very low concentrations in which chaff and flare materials would be deposited on soil and water, no measurable effect is expected (EA section 4.5.3). Additional supporting information is provided in the Blue Ribbon Panel report described in Response GE-2.
0005	SA-8	Fires can be caused by human activity as well as by lightning (EA section 3.2.2.1).
0005	LU-2	The EA acknowledges that the public has expressed concern regarding potential effects to property values due to the presence of chaff and flare residual components. However, it is unlikely that these components would accumulate in sufficient quantities to cause a visual impact (EA section 4.8.3.1). The expected accumulation of end caps from all chaff and flare use is approximately one end cap per every 38.5 acres annually. Expected annual accumulation of chaff ranges from 0.005 ounces per acre in the northern portion of the MTR to a maximum of 0.06 ounces per acre in the remaining airspace.
0005	DO-1	See response DO-1 under letter #0001.
0005	GE-1	Cannon AFB has established methods for public identification of aircraft overflight problems and a policy for dealing with offending pilots (EA section 2.7). The Military Claims Act, 10 U.S.C. 2733, provides a mechanism for the payment of meritorious claims resulting from non-combat activities by the Air Force. The Air Force is committed to promptly investigate any claims for damages to property or livestock caused by Air Force overflights and to make payments as permitted under federal law.
0005	PH-2	The Texas Panhandle-eastern New Mexico area is considered one of the worst areas in the U.S. for windblown dust (EA section 3.4.2.1). Occasionally, the windblown dust is of sufficient quantity that visibility is restricted. Considering all of the area overflown, the annual expected concentration of chaff and flare end caps would average one every 38.5 acres. Because of the quantity of windblown dust in the region, it is likely that a portion of residual plastic end caps eventually would be obscured from view due to the deposition of dust.
0005	BI-6	The fire frequency for the proposed project area is not expected to change as a result of flare use. The flare release altitude of 2000 feet helps ensure that burning flares do not reach the ground. Section 4.2.3.1 analyzes the probability of fire due to flare use.
0005	EJ-1	This EA analyzes environmental justice pursuant to Executive Orders 12898 and 13045. Environmental justice analysis addresses disproportionate impacts to minority and low income communities and children (EA section 3.9.1). There would be no changes to airspace under the proposed action.

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0005	GE-2	The Blue Ribbon Panel on the environmental effects of chaff consisted of scientists from Cornell University, Pennsylvania State University, Massachusetts Institute of Technology, Harvard University, Duke University, the University of Arizona, Woods Hole Oceanographic Institute, and the Desert Research Institute. This panel operated wholly independently from the military services in terms of data analysis and conclusions reached. The results of their analysis are presented in *Environmental Effects of RF Chaff, A Select Panel Report to the Undersecretary of Defense for Environmental Security* (Spargo 1999).
0005	LU-3	Residential property values generally are affected by a variety of factors such as national, regional, and community economic conditions; national and regional trends in employment, inflation and interest rates; local population changes; and real estate development. There is no evidence to suggest that property values would decrease under military airspace due to the presence of military training activities. Effects of the proposed action and alternatives on property values are addressed in section 4.8.3.1 of the Draft EA
0005	LU-5	The United States Environmental Protection Agency (USEPA) defines litter as "The highly visible portion of solid waste carelessly discarded outside the regular garbage and trash collection and disposal system." Residual items resulting from the use of chaff and flares, due to their small concentrations and vast dispersal, while possibly detectable in some circumstances, are not "highly visible." Additionally, when chaff and flares are ejected from an aircraft, they are being used for their intended purpose, and are not being "carelessly discarded."
0005	LU-4	Section 3.8 acknowledges the varied recreational opportunities that exist under the existing military training airspace. For visitors within designated special use areas, the likelihood of the presence of chaff or flare residual components occurring at a level that would disturb scenic quality or diminish the recreation experience is remote (EA section 4.8.3). The expected accumulation of end caps from all chaff and flare use is approximately one end cap per every 38.5 acres annually. Expected annual accumulation of chaff ranges from 0.005 ounce per acre in the northern portion of the MTR to a maximum of 0.06 ounce per acre in the remaining airspace. In addition, no increases in overflights are proposed over existing airspace in the area.
0006	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.

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0006	BI-3	Several recent analyses have concluded that chaff is unlikely to modify the chemistry of aquatic habitats. The primary area of concern for water chemistry effects is aluminum toxicity in freshwater systems, which typically range in pH from 6.5 to 9 (Horne and Goldman 1994). Under these conditions, acute aluminum toxicity levels would be reached at aluminum concentrations of 1.496 mg/L (Air Force 1997a). In the Air Force study (1997a), aluminum concentrations of approximately 1/6 the freshwater acute value (i.e., 0.25 mg/L) were measured in pH-neutral water with a chaff to water ratio of 1:20. As explained in section 4.5.3.1, the likelihood of these ratios and aluminum concentrations occurring in a natural setting under proposed chaff dispersal rates is low.
0006	BI-4	Recent data developed by a group of independent scientists (Spargo 1999) in response to issues raised by the 1998 GAO report concluded that 1) adverse effects of chaff on animals due to ingestion or inhalation are considered negligible to non-existent; and 2) freshwater organisms exposed to "relevant levels of chaff" are unlikely to be adversely affected. These conclusions were based on assessments of realistic chaff exposure levels (up to12 grams/hectare/year (g/ha/year) [4.86 grams/acre/year (g/ac/year)], as compared to less than 4.23 g/ha/yr [1.71 grams/acre/year] under the proposed action), and well-supported estimates of exposure levels required to produce toxicity, disease, or reduced growth rates in terrestrial animals and freshwater organisms. The analyses concluded that it is "highly unlikely that any harmful effects are to be expected due to chaff ingestion by livestock" (Spargo 1999). This conclusion is based on analyses that showed: 1) chaff ingestion by beef calves (ingestion by calves was induced by coating the chaff with molasses) at a rate of 7 g to 1.8 kg daily resulted in no adverse effects such as changes in weight gain or blood chemistry; 2) aluminum toxicity levels for a typical 550-kg beef cow would require approximately 11 g of soluble aluminum to be nutritionally available daily; this level would not be reached even under chaff dispersal rates of 20 g/ha (8.10 g/ac); and 3) typical chaff dispersal rates are sufficiently low to limit the potential for exposure of grazing animals to chaff fibers well below levels at which exposure could theoretically be possible. Proposed chaff dispersal rates for this project (4.23 g/ha [1.71 g/ac] annually) are lower than rates examined in the review and would not pose a threat to livestock health. The panel also concluded that, due to their large size (15-25µm diameter), primary chaff fibers are not capable of being inhaled by humans or laboratory animals, and that these results should apply to domestic livestock as well. Furthermore, "the tiny number of fibers that could be inhaled because they are of respirable size or have degraded to such a size are insufficient to produce disease. Persons occupationally…exposed to the components of chaff fibers are at no increased risk for lung fibrosis or

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0006	BI-4 (continued)	cancer" (Spargo 1999, page 24). The review concluded that livestock are unlikely to consume or inhale chaff fibers, and that toxicity, disease, or reduced growth rates have not been found to occur in humans or livestock in rare cases where chaff is ingested or inhaled. As described in Response BI-3, recent analyses have concluded that chaff is unlikely to modify the chemistry of aquatic habitats. The occurrence of sufficient aluminum concentrations in a natural setting under proposed chaff dispersal rates also is unlikely (EA section 4.5.3.1).
0006	DO-2	For this analysis, calculations of chaff concentrations were conservative since they were based on equal distributions under airspace without regard to release altitude. These distributions were then analyzed by resource to identify potential environmental consequences.
0006	BI-5	The Air Force employs altitude restrictions over the Pecos River, and the Fort Sumner/Santa Rosa area is part of an existing avoidance area for Air Force overflights. As described in Response BI-3, chaff is unlikely to modify the chemistry of aquatic habitats, and the likelihood of sufficient aluminum concentrations occurring in a natural setting under proposed chaff dispersal rates is low (EA section 4.5.3.1).
0006	DO-3	Chaff and flare use would be ongoing under the proposed action.
0006	DO-4	Analysis of chaff accumulation was conducted by resource area over a defined period of one year.
0007	TH-1	Thank you for your comments and participation in the Environmental Impact Analysis Process for this Defensive Training Initiative. Public and agency involvement plays a critical role in the National Environmental Policy Act (NEPA) process as it helps to shape the analyses and focus on specific resource areas important to you.
0007	PH-3	There are no construction activities associated with the proposed action or any of the alternatives (EA Chapter 2.0). Therefore, compliance with NPDES regulations as a consequence of the proposed action or alternatives is not applicable in this case.
0007	DO-5	The proposed action or alternatives do not involve new construction or other ground-based training activities that could generate air quality impacts (EA section 2.7).
0007	MM-1	Under the proposed action, no changes to operations on the Melrose Range are anticipated. Impacts to hazardous waste management at Cannon AFB are analyzed in section 4.3 of the EA.

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0007	MM-2	The Air Force agrees that flares fit the definition of military munitions in 20.4.1.100 NMAC and 40 CFR 260.10. 40 CFR 266.202 (a)(1)(i) and its NMAC counterpart (20.4.1.700) explain that "a military munition is not a solid waste when: (1) used for its intended purpose, including: (i) use in training military personnel..." Aircrews expending flares are training. The flares – even if they malfunction – are being used for their intended purpose. The Air Force does not disagree that 40 CFR 266.220(d) and its New Mexico counterpart apply in this case. The Air Force is responsible for abating imminent and substantial endangerments when that standard is met, and the Air Force could conceivably have corrective action responsibilities under the RCRA sections cited in the comment letter. Nonetheless, the Air Force would not be engaging in the actions proposed under DTI if it believed there were any real possibilities of subjecting itself to corrective action or imminent and substantial endangerment authorities. A useful analogy is to a farmer's use of hazardous pesticides on his crops. These pesticides may be dangerous to human health but the farmer is using them for their intended purpose. Is it theoretically possible that certain environmental conditions such as a shallow water table could result in the farmer being liable for an imminent and substantial endangerment? Yes, it is theoretically possible but it is highly unlikely.
0007	BI-7	An alternative to the potassium perchlorate in the first fire mixture has been authorized. It is a "dip coat" which does not contain any potassium perchlorate. Instead, it is made up of the same chemicals as the flare pellets (i.e., teflon, magnesium, and fluoroelastomer) in different percentages. The two companies that manufacture the M-206 flare have adopted this alternative.
0007	BI-8	Refer to second paragraph of BI-4 under letter #0006.
0007	BI-9	Refer to third paragraph of BI-4 under letter #0006.

ACRONYMS AND ABBREVIATIONS

27 FW	27th Fighter Wing
AAQS	Ambient Air Quality Standards
AAM	Annual Arithmetic Mean
ACEC	Areas of Critical Environmental Concern
ACM	Air Combat Maneuvering
ACT	Air Combat Tactics
AEF	Aerospace Expeditionary Force
AFB	Air Force Base
AFPD	Air Force Policy Directive
AFR	Air Force Range
AGL	above ground level
AGM	Annual Geometric Mean
Air Force	United States Air Force
ARTCC	Air Route Traffic Control Center
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
BFM	Basic Fighter Maneuvering
BLM	Bureau of Land Management
BP	Before Present
BWD	Basic Weapons Delivery
CAA	Clean Air Act
CAS	Close Air Support
CEQ	Council on Environmental Quality
CO	carbon monoxide
CT	Combat Training
DoD	Department of Defense
DOPAA	Description of Proposed Action and Alternatives
DTI	Defensive Training Initiative
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FL	flight level
HAP	High Accident Potential
HPD	Historic Preservation Division
IT	Intercept Training
IFR	instrument flight rules
JTX	Joint Training Exercise
kg	kilogram
LANT	Low Altitude High Speed Navigation and Training
$\mu g/m^3$	micrograms per cubic meter
min	minutes
mg	milligram
MOA	Military Operations Area
mph	miles per hours
MSL	mean sea level
MTR	Military Training Route
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NMGF	New Mexico Department of Game and Fish
NO_2	nitrogen dioxide
NM	nautical miles
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
O_3	ozone
Pb	lead
PM_{10}	particulate matter equal to or less than 10 microns in diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RBTI	Realistic Bomber Training Initiative
RMP	Resource Management Plan
ROD	Record of Decision
ROI	region of influence
SAT	Surface Attack Tactics
SEAD	Suppression of Enemy Air Defenses
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SRMA	Special Recreation Management Area
SWA	Southwest Area Wildland
TFW	Tactical Fighter Wings
TWD	Tactical Weapons Delivery
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VFR	visual flight rules
VR	visual route