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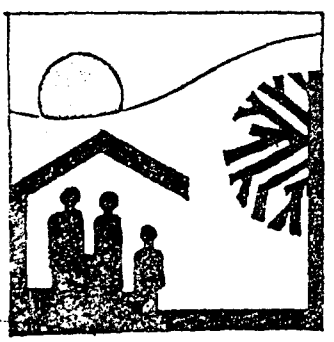

FINAL

ENVIRONMENTAL IMPACT STATEMENT
ESTABLISHMENT OF THE GANDY RANGE EXTENSION
AND ADJACENT RESTRICTED AIRSPACE AS AN
AREA FOR SUPERSONIC FLIGHT TRAINING

HILL AFB, UTAH

DEPARTMENT OF THE AIR FORCE

89 9 28 110

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330-1000

OFFICE OF THE ASSISTANT SECRETARY

October 3, 1985

TO: ALL INTERESTED GOVERNMENT AGENCIES, PUBLIC GROUPS, AND INDIVIDUALS

Attached is the Final Environmental Impact Statement (EIS) for the Gandy Range Extension and Adjacent Restricted Airspace As an Area for Supersonic Flight Training. The document is provided in compliance with the regulations of the President's Council on Environmental Quality.

The final EIS addresses the proposed action of designating an additional portion of existing military airspace to accommodate supersonic flight. There will be a 30 day waiting period before a final decision on the proposed action. A decision on the proposed action will be made after November 11, 1985.

Persons or agencies wishing additional information may contact:

Public Affairs Office
Hill Air Force Base, UT 84056

Sincerely,

GARY D. VEST
Deputy for Environment and Safety
Deputy Assistant Secretary of the Air Force
(Installations, Environment and Safety)

1 Attachment
Final Environmental
Impact Statement

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COVER SHEET

(a) Responsible Agency: U.S. Air Force

(b) Proposed Action: Designate an additional portion of existing military airspace to accommodate supersonic flight. The airspace is adjacent to the Utah Test and Training Range "Southern Supersonic Flight Airspace" and is located over portions of Western Tooele County in Utah and Elko County in Nevada.

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(d) Designation: Final Environmental Impact Statement (FEIS)

(e) Abstract: The Air Force needs additional area to conduct supersonic flight training for aircraft associated with Hill Air Force Base, Utah. The preferred alternative to meet this requirement is to designate an area of existing military airspace which is adjacent to the area currently used for supersonic flight for this purpose. The resulting supersonic area, a combination of the existing plus the proposed areas, would accommodate up to about 768 supersonic sorties per month. The existing area now accommodates a maximum of about 614 such sorties per month. Thus, the preferred alternative could result in an increase of about 150 supersonic sorties in an area about double the size of the area currently accommodating the 612 sorties. The new land area beneath the airspace is predominately BLM land, but does have an estimated 50 residents. If all 768 supersonic sorties were flown into this new area (a worst case which will not occur), it is estimated that any one spot on the ground would be subjected to one or more sonic booms per day only 35 percent of the time, and two or more sonic booms per day only seven percent of the time. As a result of public comments on the draft EIS, the Air Force substantially reduced the number of proposed additional sorties from about 400 to 150 per month, the number of people potentially affected from 350 to 50, and the land area from 2478 to 1360 square miles. The environmental impacts are summarized on the following pages. (xx)

(f) Date made available to Public: 3 October 1985.

SUMMARY

1. Purpose and Need:

The Air Force has identified a need to accommodate additional supersonic operations within 200 Nautical Miles (NM) of Hill Air Force Base, Utah. The need results from improvements in Air Force fighter plane performance and changing mission/training requirements. The "Southern Supersonic Flight Airspace", part of the existing overall supersonic airspace in the Utah Test and Training Range (UTTR), is not large enough to accommodate the existing missions at Hill Air Force Base and the training, exercises, and tests scheduled for the UTTR. The F-16 aircraft assigned to Hill Air Force Base can routinely exceed the speed of sound during air-to-air combat training. The authority to exceed the speed of sound is required to remove artificial restrictions on training. The pilot needs to train as he will fight in combat.

The 388 Tactical Fighter Wing (TFW) and the 419 TFW's full complement of F-16 aircraft require 1,024 air-to-air sorties per month to maintain aircrew proficiency. For optimum training capabilities these flights should be flown in airspace approved for supersonic flight; however, a capacity for about 768 such supersonic flights is adequate. The "Southern Supersonic Flight Airspace" (Figure 2.0), will handle a maximum of 614 of these air-to-air sorties per month when fully available. This capability should not change in the future and testing and training activities that occasionally override the airspace's ability to support these air-to-air sorties should also continue in the future. The proposed action described below, if implemented, will insure the capacity to accommodate up to 768 supersonic sorties per month.

2. Description of Proposed Action:

The Air Force proposes to designate an additional portion of existing military airspace adjacent to the "Southern Supersonic Flight Airspace" to accommodate supersonic flight. The "Southern Supersonic Flight Airspace" combined with the additional area will allow the Air Force to improve the quality of the training currently received. The additional supersonic airspace would not be over DOD land. The combined area may accommodate up to 768 supersonic sorties per month. The additional portion of the existing military airspace is presently charted as Gandy Range Extension Military Operations Area/Air Traffic Control Assigned Airspace (MOA/ATCAA), thus no additional airspace designated for military use is required. The remaining air-to-air sorties will be flown in the northern restricted airspace (R-6404 in Figure 2.0) at subsonic speeds.

This proposal is a reduction of the proposed area described in the Draft Environmental Impact Statement. The proposed action in the draft EIS encompassed the entire Gandy MOA and adjacent restricted airspace. The current proposal is to operate in the northern portion of the Gandy MOA and adjacent restricted airspace. This is within the bounds of the analysis in the draft EIS. Because of public comments on the proposed action in the draft EIS, the Air Force is now proposing the smaller area (northern portion

only of Gandy MOA and adjacent restricted airspace) as the preferred alternative. This change substantially reduces the number of proposed additional sorties from about 400 to 150 per month, the number of people potentialiy affected from 350 to 50 and the land over from 2475 to 1360 square miles. The 768 supersonic sorties per month will not meet all of the Air Force needs, however, the number has been reduced from the optimum to fit into a much smaller area. This was done in response to public concerns and to minimize potential impacts.

The supersonic flying which is proposed will range from 5,000 feet above ground level (AGL) to 58,000 feet above mean sea level (MSL). Each supersonic sortie (one airplane, one flight) will average two to three short periods of supersonic flight which creates a sonic boom. During a worst case with the maximum number of sorties being scheduled into the airspace, approximately 82 sonic booms will be produced per day.

However, only 30 percent of the booms are expected to reach the ground. Under such worst case conditions it is estimated that any one spot on the ground may be subjected to one or more sonic booms per day only 35 percent of the time; two or more sonic booms per day would be expected only seven percent of the time.

All the airspace in the UTTR and the military use of the Gandy MOA is scheduled by the 6501 Range Squadron and controlled by the 299 Range Control Squadron. The UTTR managers provide coordination and assistance to legitimate nonmilitary users of restricted airspace within the UTTR.

3. Affected Environment:

The existing Gandy MOA and restricted airspace east of Gandy MOA overlays a sparsely populated, high altitude range which has numerous ridgelines running approximately north to south. There are no large bodies of water under the airspace covered in the proposed action. Vegetation is typical of the mountain-west with desert shrubs, greasewood and scattered grasses sometimes suitable for grazing. Some of the higher slopes in the Goshute and Deep Creek ranges host Pygmy forests (juniper and pinyon pines) and even subalpine vegetation (pine, spruces, and quaking aspens) in the summit areas. Sheep and cattle are the predominant domestic animals, with horses in some areas. The area is populated with a wide variety of wildlife: mammals, reptiles, raptors (including golden eagles and bald eagles) and other avians. Of the threatened and endangered species, only the bald eagle frequents the area of the proposed supersonic flight airspace.

Land uses include ranching/grazing and isolated small scale mining. Recreation in the area encompasses a variety of outdoor activities. Tourism is limited to near the one main route through the area (hotel/casino development at Wendover has expanded since the original notices of intent on this EIS; however, this is outside of the proposed airspace.)

4. Environmental Consequences:

The preferred alternative meets operational requirements better than the other alternatives, with one exception. The original proposal from the

Draft EIS, which also encompasses a large area south of the current proposal, remains operationally superior to the proposed action. The proposed action's environmental consequences are found to be generally acceptable for residential living and the preferred alternative avoids large population centers. The primary environmental concern associated with the proposed action is the effect of the sonic booms. The potential of long-term health effects from loud noise associated with supersonic activity is a debatable issue. Some researchers believe there is a link between noise and ill-health; however, this is contrary to the consensus of the scientific community at this time.

Air quality will be slightly affected by the operation of aircraft at supersonic speeds in the proposed airspace. Military and civilian aircraft now operate in the airspace of the proposed action. At the higher engine power settings required to achieve and maintain supersonic flight, the rate at which engine air pollutants enter the atmosphere will also increase. Based on the high altitude at which supersonic flight operations are conducted, the large operating area involved, and the quantity of air pollutants added by non-point sources, military flying operations are considered to have a relatively insignificant impact upon the air quality.

Fish and wildlife exist in the area but are not expected to be adversely effected by any change in air quality resulting from this action. Archeological sites and historical sites exist in the area of the proposal, but again the proposed action is not expected to have a deleterous effect.

The impact of noise on the area was studied. The analysis concluded that the proposed action will generate sonic booms which will not be damaging, but they will be heard and likely annoying. Although subsonic flight is now present, the proposal would result in additional noise impact on the environment beneath and near the new area. Several state and federal agencies commenting on the proposed supersonic flight action have expressed concern regarding the potential adverse impact that frequent sonic booms may have on both the human and wildlife population of the area. Based on calculations of nominal sonic boom overpressures and assuming people beneath the area live at or below 5,000 feet MSL, the maximum overpressure to which individuals should be exposed is 7.48 pounds per square foot (psf), but the overpressures occurring most often should be less than 3.52 psf. The overpressure levels do not cause injury to people. Noise at the expected levels of under 60 decibels (long-term C-weighed day night average) is not expected to adversely affect the health of people and is below levels considered acceptable by Federal agencies (EPA, HUD, VA, DOT and DOD) for residential areas. A direct cause and effect relationship has not been demonstrated between noise exposure and adverse health effects in any study using human subjects. The booms may cause annoyance, but use of proposed action will avoid the vast majority of the 350 individuals which would have been impacted under the original proposal. Less than 50 persons have been observed residing in the area of the proposed action, northern part of Gandy MOA and the adjacent restricted airspace. A few windows can be expected to be broken or cracked as a result of sonic booms. The Air Force has established procedures to pay for damages from sonic booms.

The impact of sonic booms and aircraft noise on wildlife and animals has also been studied. Startle reactions or alerting are common reactions, however, most species became adapted to the noise. Evidence that sonic booms adversly impacted reproduction was not found, nor was conclusive evidence on any adverse effects to relocated species noted. However, the Air Force recognizes potential sensitivity of wildlife immediately after relocation to a new area.

The impact of the preferred alternative on aviation is slight. While there will be an increase of speed of the military aircraft operating in the northern half of the Gandy MOA, the absolute increase will be approximately 20 percent of the speeds now being flown.

The economic impact of the proposed action on the area of western Utah/ eastern Nevada is negligible. Recreational activities now taking place in the land area beneath the proposed supersonic flight airspace are of the outdoor, individual or small group, wilderness experience nature. These are activities where the values of unspoiled nature are deliberately sought. Because of the remoteness of the area, the total number of people participating in these activities is expected to be small. Noise created by sonic booms would probably be annoying to some of the recreationists. The sonic booms will not involve any irreversible damage to the recreational capicity of the area. To the fullest extent possible, sensitive periods such as night time and weekends would be avoided, thus further mitigating possible annoyances. No changes in land use are envisioned as a result of the proposed action.

5. Alternatives to the Proposed Action:

a. No action. Although the no action alternative is the environmentally preferred alternative, it does not resolve the Air Force need for additional airspace for supersonic operations to occur. The no action alternative also results in continued use of the Gandy MOA by fighter aircraft with a procedural limit on the speed of the aircraft. The no action alternative does not reduce or increase the current level of air pollutants, noise, and air traffic.

b. Relocating the supersonic flight requirement to some other airspace within the UTTR. This alternative is constrained by the existence of ground targets and instrumented impact areas in the other areas of the UTTR. Other parts of the UTTR are now used for supersonic operations to the maximum extent possible. As compared to the proposed air space, alternatives for supersonic flight training areas would result in a negative impact on existing military usage, commerical/general aviation traffic and/or would expose significantly more people to sonic boom activity.

c. Use of distant supersonic airspace is limited to 200 miles from Hill AFB. Transit distance further than 200 miles will reduce or eliminate time available for training because of insufficient fuel. Air refueling, which greatly extends the range of the F-16, is not feasible because of limited KC-135 and KC-10 aircraft availability, and the expense of operating the air tanker force. No other suitable areas were located within 200 miles of Hill AFB.

d. Relocating the 388 TFW is not a reasonable alternative. Hill AFB is a desirable location, and facilities on the base would have to be replicated elsewhere if the wing was moved.

e. Changing the geographic or vertical dimensions of the proposed supersonic flight airspace would severely restrict F-16 realistic training opportunities in this area. If the geographic size was reduced, the public beneath the adjusted area boundaries would be exposed to more concentrated sonic boom activity as a result of the smaller operating airspace. Raising the minimum supersonic flight altitude above 5,000 feet AGL would degrade realistic air combat training in the area. If the floor of the airspace were raised above 10,000 feet AGL, training would be seriously degraded because it would have to be accomplished at altitudes that would not represent actual combat situations.

f. Utilizing the entire Gandy MOA rather than just the northern half for supersonic flight training. This alternative best meets the training requirements. It was presented in the Draft EIS as the proposed action. The public vigorously commented against the proposal, and an alternative which partially satisfied the requirement was developed. The use of the entire Gandy MOA has been dropped as the preferred alternative. The use of the entire Gandy MOA for supersonic flight would significantly increase the number of people potentially annoyed by sonic booms.

5. Public Review:

A notice of intent to prepare this EIS was published in August 1980. The Draft EIS was released to the public and other agencies on 19 August 1983. Comments were received until 16 December 1983. Public hearings were held in Ely and Elko, Nevada, and Ibapah, Utah. One hundred and thirty four written comments were received, and 61 comments were made at the hearings. The Air Force responded to approximately 295 points of discussion. Because of the areas remoteness, residents are accustomed to the solitude and tranquility of the rural environment. Many have chosen this lifestyle to purposely avoid the noise and pressures of urban centers. A number of commentors objected to this infusion of sonic booms into that environment.

Public commentors also urged the Air Force to provide a "worst-case" analysis of potential health impacts caused by sonic booms. However, specific predictions of such impacts are not possible. Additional years of research are needed to scientifically determine causal connections or to realistically predict generalized health effects based upon noise. Nevertheless, it has been suggested that there are links between noise and problems such as hypertension, cardiovascular changes, increased neurologic and gastrointestinal disturbances, changes in the course of pregnancy, and changes in hormone levels and other chemical balances. These effects are exemplary of conditions associated with stress. While such effects have been suggested, no method is available to predict either any specific reaction or the portion of the community which could be affected. Although such effects cannot be dismissed, prevailing scientific opinion supports the expectation that the predicted noise exposure would not cause the effects speculated on above.

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LIST OF FREQUENTLY USED ACRONYMS

AFB	Air Force Base
AFSC	Air Force Systems Command
AGL	Altitude Above Ground Level
ATCAA	Air Traffic Control Assigned Airspace Area
BLM	Bureau of Land Management
CO	Carbon Monoxide
dB	Decibels
DEIS	Draft Environmental Impact Statement
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FL580	Flight Level 580 or approximately 58,000 feet MSL
HAMOTS	High Accuracy Multiple Object Tracking System
HC	Hydrocarbons
HUS	HAMOTS Upgrading System
IFR	Instrument Flight Rules
MOA	Military Operations Area
MSL	Altitude Above Mean Sea Level
NASA	National Aeronautics and Space Administration
NM	Nautical Mile
NO_x	Nitrogen Oxides
psf	Pounds per Square Foot
SO_x	Sulfur Oxides
SO_2	Sulfur Dioxide

TAC	Tactical Air Command
TFW	Tactical Fighter Wing
UTTR	Utah Test and Training Range
VFR	Visual Flight Rules
WSA	Wilderness Study Area

DEFINITIONS OF FREQUENTLY USED TERMS

Air Traffic Control Assigned Airspace Area (ATCAAA) - Airspace of defined vertical/lateral limits, assigned by ATC to provide air traffic separation between the specified operation being conducted within the assigned airspace and other IFR air traffic.

Cutoff Mach Number - The aircraft Mach number below which the temperature gradient of the atmosphere refracts the sonic boom in such a way that it does not reach the ground and thus is not heard. Aircraft speeds above the cutoff Mach number will create sonic booms that progagate to the ground. The cutoff Mach number is solely dependent upon aircraft elevation and meteorological conditions and can be calculated as shown in Appendix B.

Day-Night Average Sound Level (DNL) - The day-night average sound level is a measure of the noise environment over a 24-hour annual average busy day with a 10 decibel penalty to events that occur after 10:00 p.m. and before 7:00 a.m.

dB - Decibel, a logarithmic unit which expresses the ratio between two sound pressures, measuring the relative loudness of sounds. When measuring sound pressure on the decibel scale, in effect, one is comparing the levels with a standard reference pressure which is accepted as corresponding to 0 decibels, about the faintest sound that can be heard by a person with very good hearing in a very quiet location.

Flight Level (FL) - A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255, an indication of 25,500 feet.

Focus Boom - A focus boom occurs when two or more shock waves from an aircraft in supersonic flight converge on the same point in space at the same time causing a buildup of the overpressures. These focus booms, generally caused by supersonic maneuvers or accelerations, do not move with the aircraft, but only occur in one location which can be either in the air or on the ground.

Mach Number - A number representing the ratio of the speed of a body to the speed of a sound in the surrounding atmosphere. Subsonic speeds are represented by numbers less than 1.0, supersonic speeds by a Mach number greater than 1.0.

Military Operations Area (MOA) - An airspace assignment of defined vertical and lateral dimensions, established outside positive control area to separate/segragate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

Nautical Mile - 1.150 statute miles.

Sortie - A mission by a single military aircraft.

Sonic Boom - An acoustic phenomenon (sound) heard when an object exceeds the speed of sound in air, that is, about 738 miles per hour at sea level and standard atmospheric pressure.

Subsonic - Movement of an object at a speed less than the speed of sound.

Supersonic - Movement of an object at a speed greater than the speed of sound.

I. PURPOSE OF AND NEED FOR ACTION:

1.0 Purpose:

The purpose of the proposed action is to expand existing airspace within the Utah Test and Training Range (UTTR) for conducting supersonic flight training from 5,000 feet Above Ground Level (AGL) to 58,000 Mean Sea Level (MSL). Existing missions at Hill Air Force Base (AFB), in particular F-16 fighter pilot training and increased special exercises and tests on the UTTR, has made airspace already approved for supersonic flight inadequate in size.

1.1 BACKGROUND:

1.1.1 Utah Test and Training Range:

In December 1977, the Deputy Secretary of Defense approved the plan for consolidation of the Hill/Wendover Ranges and the Dugway Proving Ground into a single range. On 1 January 1979, the Air Force Systems Command (AFSC) became the single range manager and the range is now operated as a major training and test facility base, known as the Utah Test and Training Range (UTTR). The AFSC organization performing this managerial task is the 6501 Range Squadron located at Hill AFB. Since the UTTR is operated as a DOD facility, range plans and programs must consider the requirements of all DOD range users. This has allowed a more concise ability to plan for and forecast the total usage of the UTTR. Besides providing a more reliable source of determining range usage thar was available in the past, this ability has attracted more DOD training and tests to the range. These two factors, improved planning capability and increased range activity, along with better data available on the training requirements of the F-16 aircraft are the major contributors to the present proposal to establish the additional supersonic flight airspace.

Figure 1.0 depicts the land areas, restricted airspaces, and Military Operations Areas (MOA) in the vicinity of Hill AFB which make up the UTTR. For convenience, R-6404 and the area of the Lucin MOAs will be referred to in this text as the northern range or northern portion of the UTTR and the remainder of the UTTR to the south as the southern range or southern portion. The UTTR can be divided logically into these two portions since the airspace is divided by a commercial airline corridor and the land area below also forms a corridor between DOD owned lands where an Interstate Highway (I-80) is located. These flying areas must accommodate approximately 116 F-16 sorties from the 388 TFW and the 419 TFW per day. These areas must also accommodate special exercises, research and development programs and the flight testing of aircraft that have received depot maintenance at Hill AFB.

As part of the development of the UTTR complex to augment pilot training and weapon systems test programs, there have been approximately 60 High Accuracy Multiple Object Tracking System (HAMOTS) sites installed beneath the airspace. These antenna sites, the first of which were installed in the mid 1970's, provide position data on test aircraft within the area. Twenty-two of these HAMOTS sites were more recently installed in the southern range to

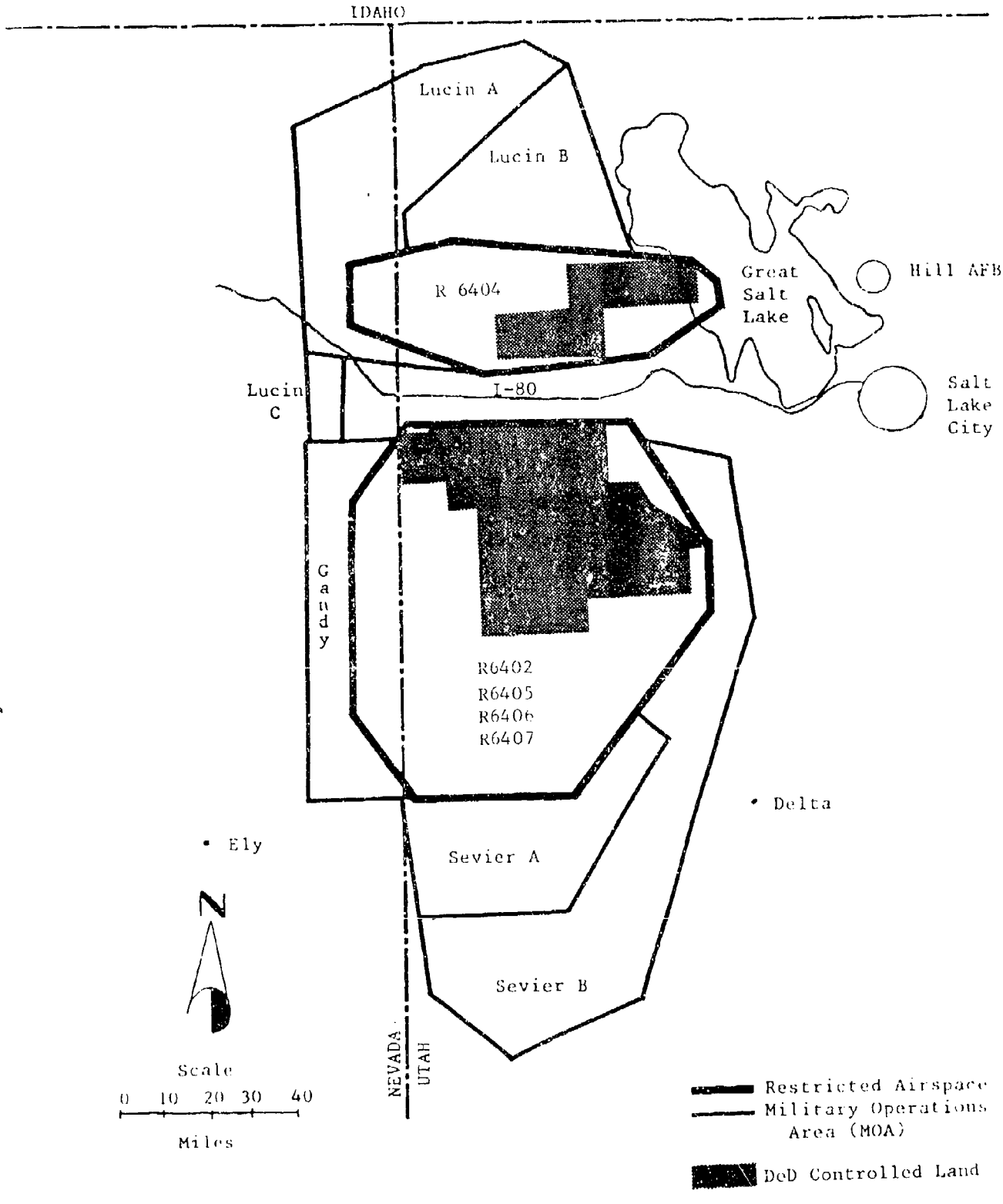


Figure 1.0

Utah Test and Training Range

facilitate the Air Launched Cruise Missile fly-off program which involved the UTTR. The Air Force has upgraded some of these HAMOTS stations to provide tracking sites for a new, highly sophisticated air combat maneuvers tracking system that has been installed within the UTTR. Since this new system is for air-to-air training,it had to service an area where most of the realistic combat maneuvers could take place. At the present time, the "Southern Supersonic Flight Airspace" and the adjacent airspace shown in Figure 2.0, best meet this description. Thus the HAMOTS sites picked for upgrading were those that could best take advantage of this airspace. This instrumentation was installed under a program known as the HAMOTS Upgrading System (HUS). Figure 3.0 shows the 35 nautical mile radius circle, designated the HUS Arena, that is covered by the new tracking system. The inner circle (20 nautical mile radius) shows the extent of the area which is covered by high resolution tracking equipment and the outer circle (50 nautical mile radius) indicates the limits of the area covered by lower resolution capabilities. Although the center of the HUS Arena is not ideally located with respect to the existing supersonic flight airspace, it is the best location that could be arranged using existing HAMOTS sites; an arrangement that provided a substantial savings (millions of dollars) to the US Government.

1.1.2 Special Tests and Exercises:

The range area is already receiving very heavy usage. The monthly range activity report for June 1982 shows 3,770 aircraft sorties being flown in the range area. Of this number 3,226 were flown by tactical units conducting operational training. Not all of these sorties exceeded the speed of sound, but because of tactical target requirements combined with supersonic flight requirements, most had to be scheduled in the southern restricted airspace. One of the highest single day activities occurred during a past Red Flag Exercise when 164 low level sorties involving supersonic flight were flown. This is a much higher sortie rate than can be accommodated with normal air-to-air sorties. The Red Flag training scenarios involve large groups of opposing aircraft while the normal air-to-air sorties accomplished within the UTTR involve much smaller groups of opposing aircraft or even one-on-one type training. One to four Red Flag Exercises are conducted per year. Each of these exercises involved composite missions of 50 to 60 aircraft simulating realistic air combat and lasted about 28 days. All Red Flag missions are scheduled in supersonic flight airspace.

As indicated before, with AFSC taking over managerial duties for the range, test activity has increased. As an example of new missions which might use the range, project managers for the Advanced Medium Range Air-to-Air Missile (AMRAAM) and the Advanced Strategic Air Launched Missile (ASALM) have conducted site surveys on the range for the feasibility of supersonic flight test operations.

The southern portion of the UTTR now has the only low level supersonic flight airspace readily available to tactical aircraft based at Hill AFB and it is located entirely over DOD restricted land area. This land area also contains many tactical ground targets used for air-to-ground training. As would be expected, these targets must be located in restricted land areas. A conflict

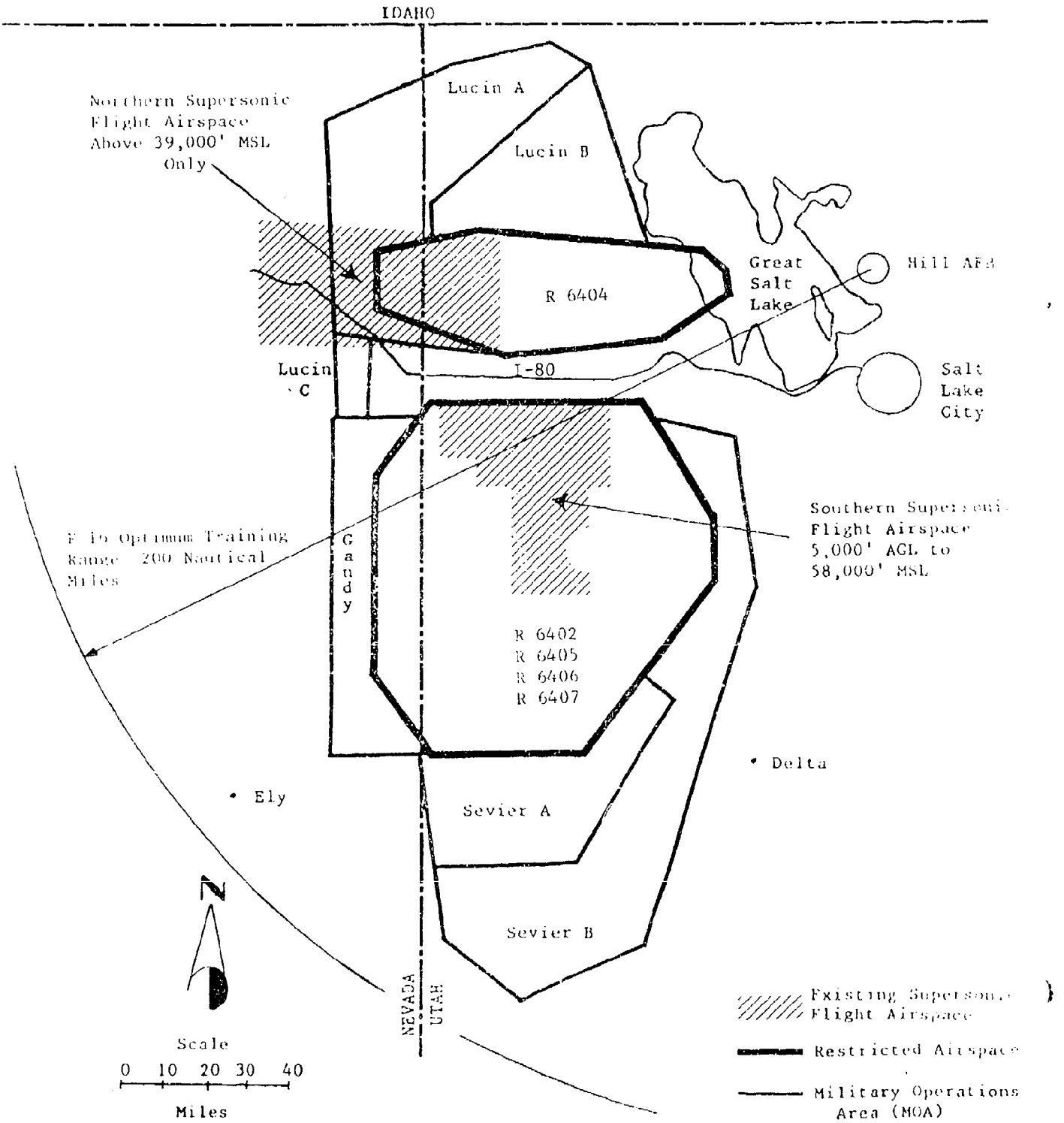


Figure 2.0
Existing Supersonic Flight Airspace
Utah Test and Training Range

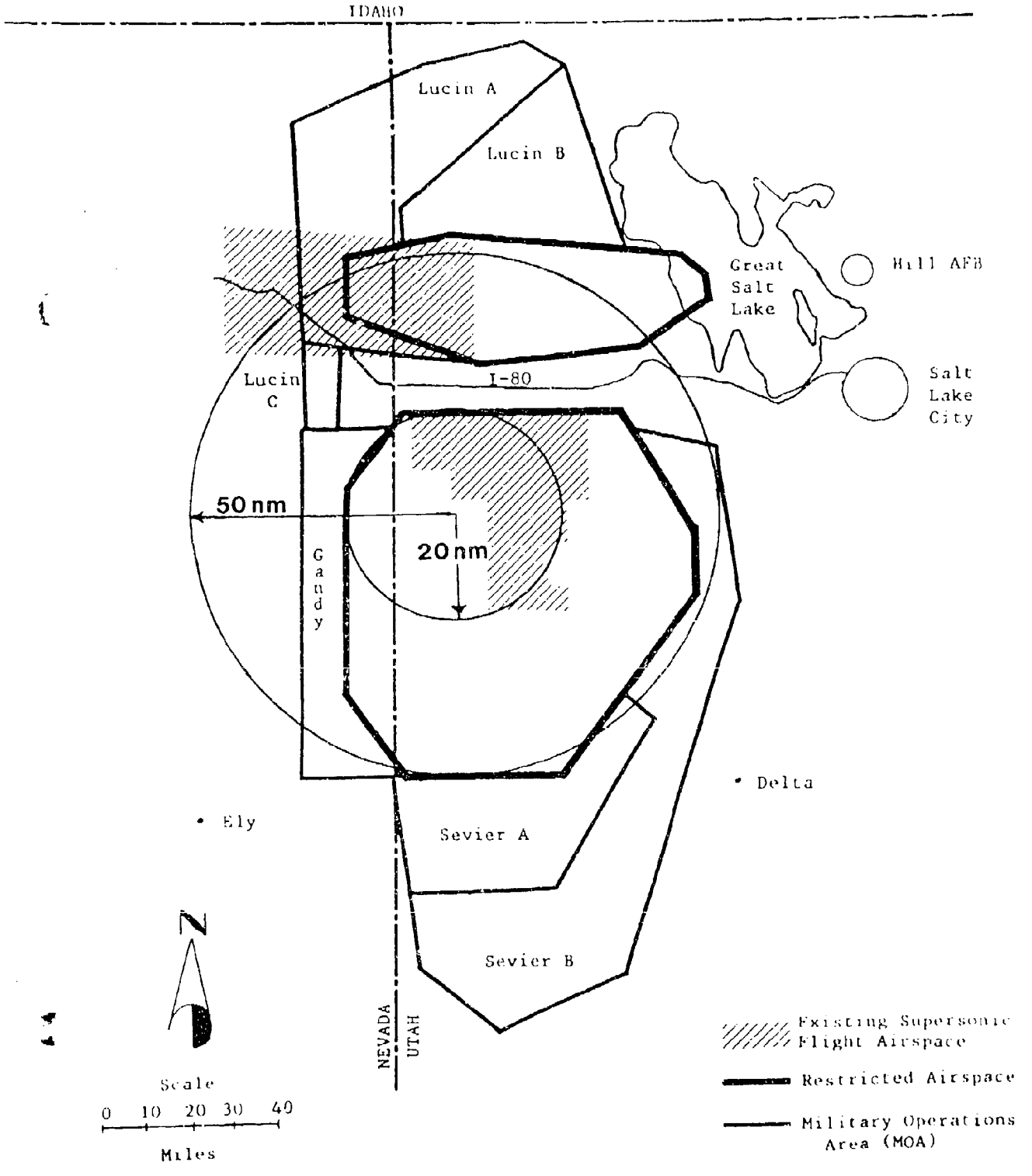


Figure 3.0
HUS Arena

sometimes arises when air-to-air and air-to-ground missions are required to be scheduled at the same time and must compete for the same airspace. Although the air-to-ground training can usually be scheduled below air-to-air flights, when a conflict does arise, the air-to-air training will often lose out since ground targets cannot be moved. The air-to-air training will have to be scheduled for adjoining airspaces that are not located over restricted land areas. However, whenever this occurs the realism of these air-to-air training missions are seriously degraded, particularly for the F-16, because no low level supersonic flight airspace is available in these adjoining airspaces. (For supersonic flight, low level applies to the airspace between 5,000 feet AGL and 30,000 feet MSL.)

Air Force Regulation 55-34 permits specific supersonic operations above 30,000 feet MSL. Sonic booms from this altitude are not considered significant because the impact of sonic booms normally decreases as the aircraft altitude increases. However, to maintain realistic training conditions, fighter aircraft must generally operate and train in the air below 25,000 feet MSL. The airspace identified in Figure 2.0 as the "Northern Supersonic Flight Airspace" is an Air Traffic Control Assigned Airspace (ATCAA) between 39,000 and 50,000 feet MSL specifically identified for the flight testing of aircraft that have received depot maintenance at Hill AFB. Supersonic speeds are a routine part of this flight testing. Technically neither this airspace nor any other ATCAA airspace above 30,000 feet MSL require the "supersonic flight" designation to be used as such; but since this particular airspace is used routinely at supersonic speeds, it is often referred to as a supersonic flight airspace.

1.2 NEED FOR THE PROPOSAL:

1.2.1 The 388 and 419 Tactical Fighter Wings (TFW):

The 388 TFW, part of the Air Force's Tactical Air Command (TAC), was activated at Hill AFB in December 1975 with approximately 1800 personnel. When it reached full strength in December 1976, the 388 TFW was equipped with 54 F-4D Phantom II aircraft. In January 1979 the 388 TFW began a phase out of the F-4D aircraft and replacement with F-16 aircraft. The environmental impact of this action was addressed in the Final Environmental Impact Statement (EIS), "F-16 Beddown at Hill AFB, Utah." In this Final EIS, dated 16 November 1977, it was indicated that airspace already approved for supersonic flight would satisfy the requirements of the F-16 mission. However, partially due to the newness of the aircraft to the Air Force inventory, the number of F-16 training flights requiring supersonic speeds was underestimated at that time. Also, the growing number of test and training operations at the UTTR which require airspace for supersonic flight were not accounted for.

The mission of the 388 and 419 TFW is to maintain in a state of readiness, personnel and equipment to perform air-to-ground missions while retaining/maintaining air superiority over enemy aircraft. An essential element in the effective accomplishment of this mission is realistic aircrew training to insure that in time of conflict, tactical forces are prepared and capable

of defeating the adversary. Recent military experience indicates that combat crew effectiveness and the ability to survive combat situations are directly related to the quality and quantity of previous training received. Airspace requirements for quality training with the F-16 aircraft dictate the use of large supersonic flight training areas to realistically employ the aircraft in the role for which it was designed . To accomplish Tactical Air Command's (TAC) directed mission and maintain a high level of combat capability, approximately 40 percent of the F-16 training sorties are air-to-air superiority oriented and should be accomplished in supersonic flight airspace. Because of wide variations in training scenarios, supersonic flight may not occur on all of the F-16 air-to-air training sorties. Supersonic capability, however, should exist so that pilots may employ the F-16 in that regime if required. Without speed restrictions, the pilots are able to use the entire flight regime of the aircraft, a necessity in providing realistic training. Requiring pilots to maintain subsonic speeds would be an artificial barrier that would not exist in actual "wartime" situations and pilots may actually develop bad habits. Currently the air superiority mission is degraded because adequate airspace in which to conduct supersonic air combat training is not available.

The 388 and 419 TFW mission training requirements dictate that 1024 air-to-air sorties per month be flown for optimum training. These missions require supersonic flight training areas for the most realistic training. Airspace presently available and appropriate for supersonic training is limited to a single airspace designated as the "Southern Supersonic Flight Airspace". This southern supersonic airspace is approved for low altitude operation with a base altitude of 5,000 feet AGL. Because of its size and the large amount of restricted land area lying below, this southern supersonic flight airspace also receives the bulk of the special exercise sorties, research and development programs and the F-16 air-to-ground sorties. At one time or another, all 150 pilots are impacted by not being able to train in a realistic environment because they must use airspace not approved for supersonic flight. Most importantly, with no supersonic flight training on a large percentage of the F-16 missions, the opportunities for pilots to develop, practice and refine sound combat tactics and habits in the supersonic flight regime are curtailed, resulting in reduced combat effectiveness and survivability.

II. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

2.0 General:

As a result of public comments received, the Air Force has developed a new proposed alternative which is a reduction in scope to the original proposal described in the DEIS. This Final EIS addresses the new preferred alternative which is intended to utilize a smaller portion of the same geographical area. Text has been added to describe the new reduced scope proposal. This proposal, as shown in figure 4.0 and figure 4.1, excludes the south half of the Gandy MOA which was originally proposed in the DEIS as shown in Figure 4.2. This is to reduce the impact of sonic booms on this area. Because of the similarity between the original proposal and the new reduced scope alternative (actually a subset of the original proposal) much of the analysis performed in the DEIS is shared with the analysis of the new preferred alternative. Also, the text has been modified to reflect the following:

A. Response to public comments and information received from the public.

B. Modifications made in the role of the F-16 in national defense; the proportion of air-to-air sorties to air-to-ground sorties has been reduced from 55 to 40 percent.

C. Response to public comments regarding readability and clarity of the EIS.

D. New restricted area boundaries.

2.1 Description of Proposed Action:

2.1.1 Proposal:

The proposed project provides for the establishment of a larger area for supersonic flight by adding onto the existing southern supersonic flight airspace (Figure 4.0). The majority of the airspace being sought for supersonic flight is now within restricted airspace with small portions in the northern half of what is designated as the Gandy Range Extension Military Operating Area (MOA). The Gandy Range Extension is now an established MOA from 100 feet above ground level (AGL) to 18,000 feet above mean sea level (MSL), and an Air Traffic Control Assigned Airspace (ATCAA) from 18,000 feet MSL to 58,000 feet MSL. The adjoining portion is currently within airspace restricted for military operations from ground level to 58,000 feet MSL. Subsonic aircraft training is currently conducted in this airspace which overlies the Utah-Nevada border. More specifically the proposed operating area overlies western portions of Tooele County in Utah and eastern portions of Elko County in Nevada as shown in Figure 4.1. The Air Force proposes to conduct aircraft training at supersonic speeds in this airspace while operating above 5,000 feet AGL. However, subsonic training will also continue in this airspace. The majority of the training will be conducted by the 388

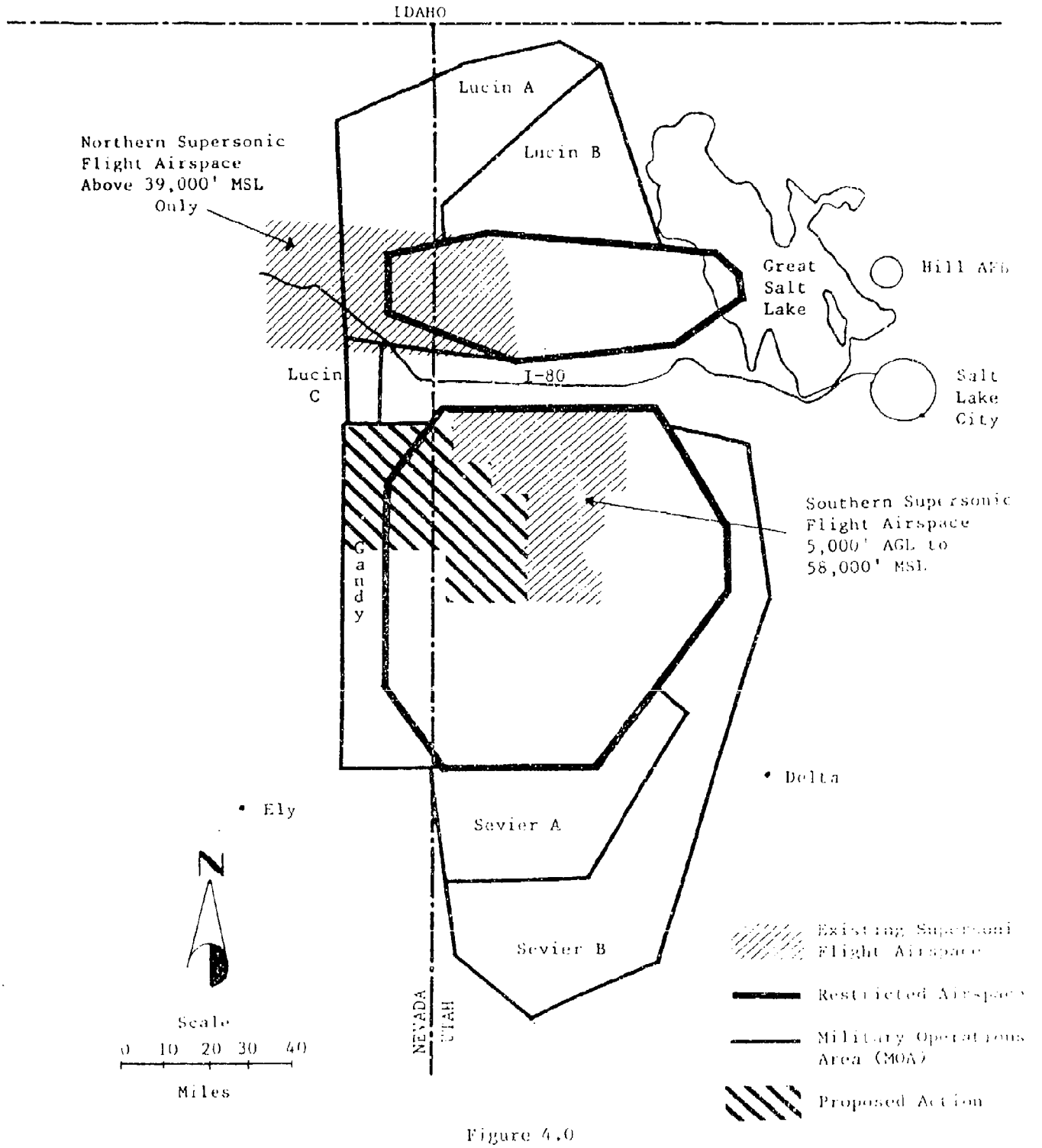


Figure 4.0
Location of Proposed Action

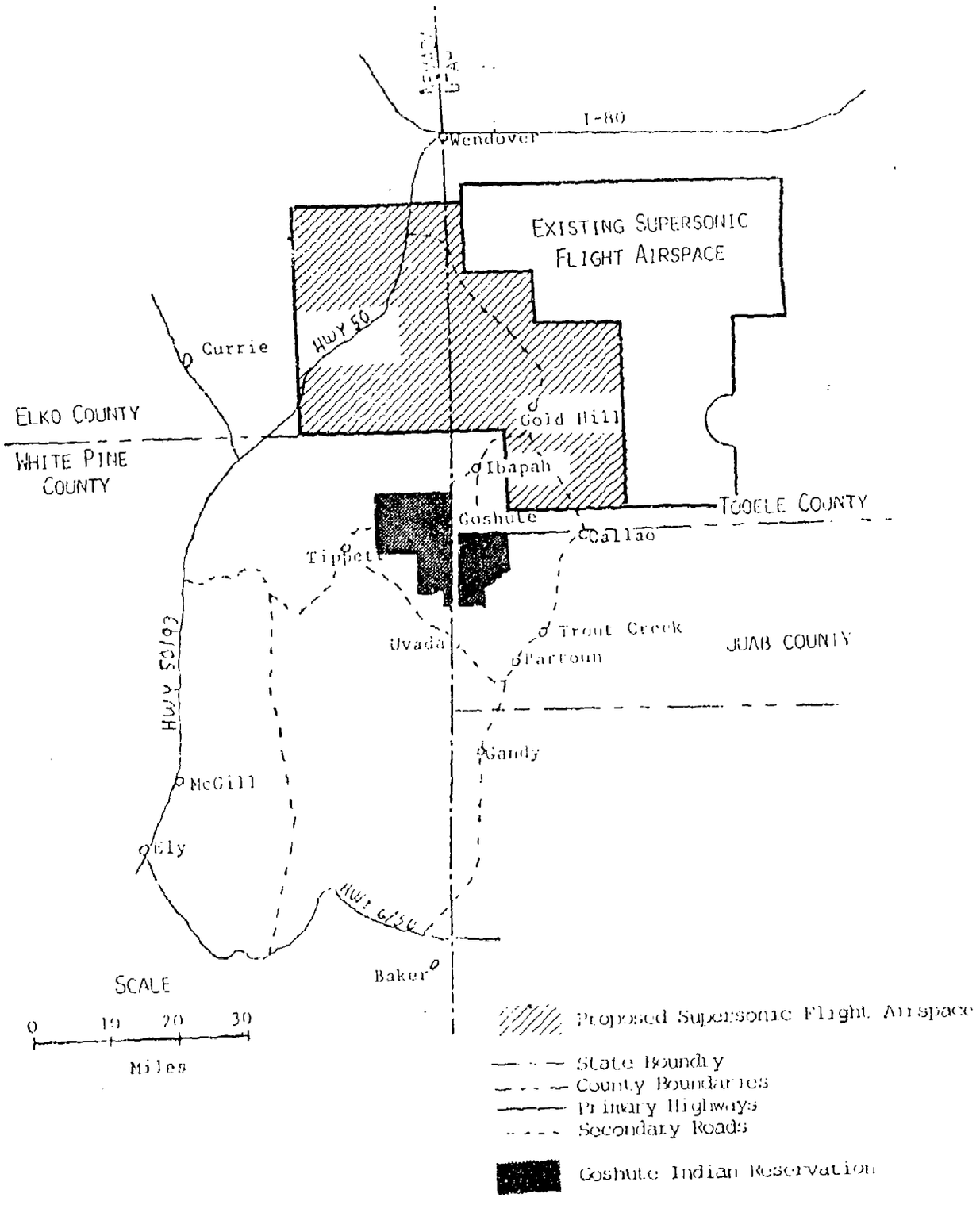


Figure 4.1
Proposed Supersonic Airspace

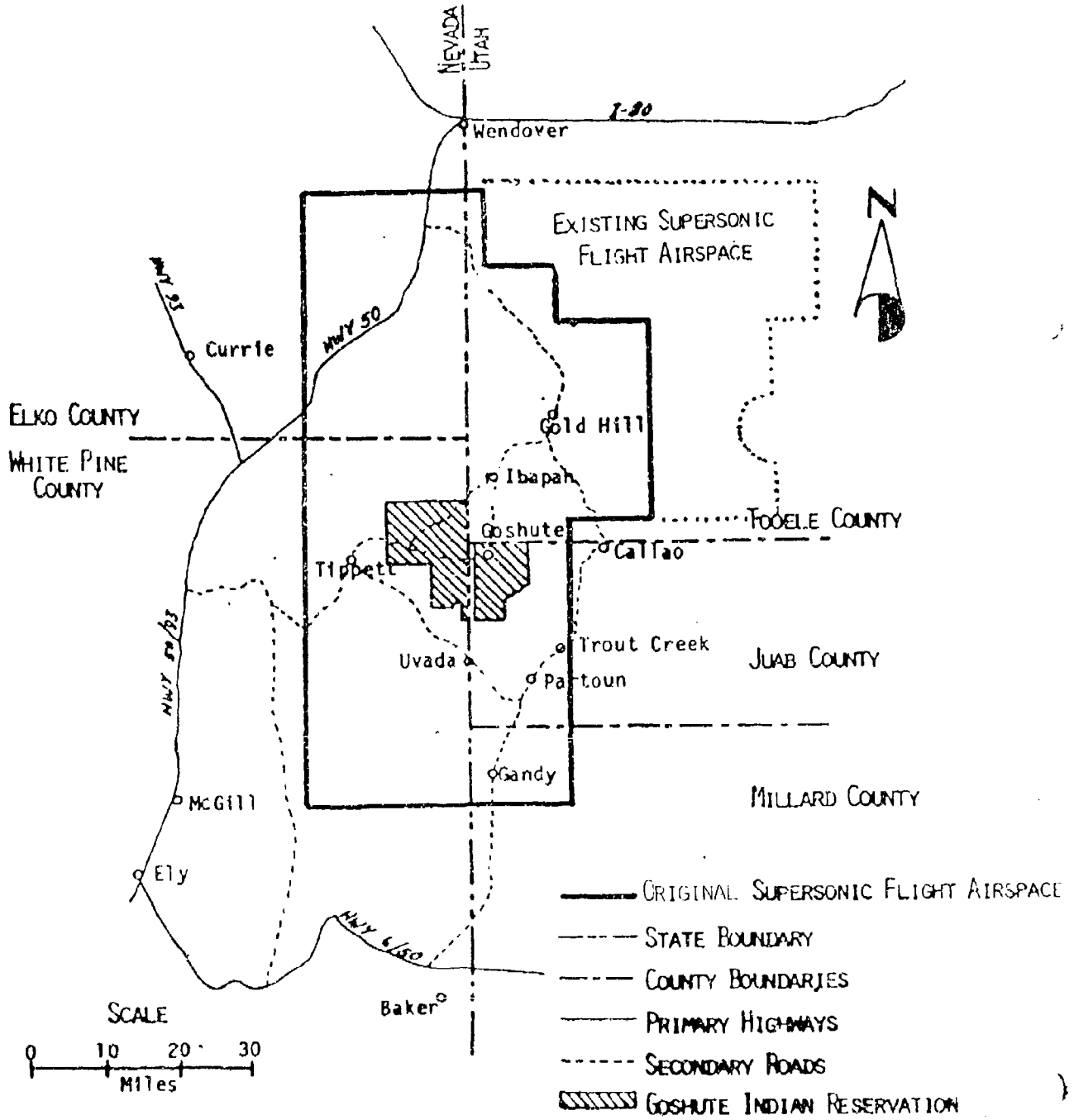


Figure 4.2
Original Supersonic Proposal

and 419 Tactical Fighter Wings (TFW) stationed at Hill Air Force Base (AFB), Utah, using the F-16 aircraft. Although other type aircraft may participate in training exercises within the proposed airspace, their usage is estimated to be less than 10 percent of the F-16 usage.

Under normal monthly operations, schedulers will normally fully utilize the airspace by scheduling 768 supersonic sorties per month out of Hill AFB to the proposed supersonic airspace and the existing supersonic airspace. Presently 614 supersonic sorties per month go into the existing supersonic airspace. A total of 768 supersonic sorties per month could be flown in the combined airspace currently approved and now proposed for supersonic flight. It is estimated that this represents the heaviest scheduling conditions. If conflicts exist with the use of the airspace over DOD land, then the worst case would be scheduling all 768 sorties per month into the western portion of the combined airspace. It is this worst case which has been analyzed in the EIS, although such occasions are expected to be rare.

Normally, the aircraft will remain at supersonic speeds for only short periods averaging about 15 seconds. Previous Air Force analysis of operations by F-15's indicates that the aircraft were supersonic 2.5 times per sortie with less than one third (0.3) of the sonic booms created reaching the ground. Analysis of previous experience also indicates that 10 percent of the sorties scheduled in supersonic airspace never actually obtain supersonic speeds. Since the F-15 and F-16 use similar air-to-air training scenerios, the characteristics of the F-15 will be used for the F-16 in this document. Therefore, under the worst case situation described above, and assuming 22 operational days per month, there will be approximately 82 sonic booms created per day within the proposed supersonic flight airspace under full use. The ground beneath the airspace, approximately 1360 square miles, would probably be subjected to 25 sonic booms per flying day.

All supersonic flight activity will be logged on Air Force Form 121 in accordance with Air Force Regulation 55-34. All flights will be conducted during daylight hours in visual meteorological conditions (VMC).

2.1.2 Locations of Proposed Training:

As might be expected, now that the HAMOTS Upgrading System (HUS) tracking equipment is installed (see section 1.1.1), the HUS Arena is generally the area of first choice for scheduling air-to-air sorties.

The existing supersonic flight airspace over the southern range will frequently be overloaded with tests, exercises and air-to-ground sorties. During these periods, particularly if approved for supersonic flights, the proposed supersonic flight airspace, to the west of the existing supersonic flight airspace, will be scheduled for most of the air-to-air sorties. Supersonic flight would be randomly distributed throughout within the approved area.

2.2 Alternatives to the Proposed Action:

The alternatives and the criteria used to determine their capability to meet operational constraints are discussed below. One change has been made to these criteria which differs from those discussed in the DEIS. Originally, we stated that the training area should be located within 100 nautical miles of Hill AFB to ensure that adequate fuel is available to allow sufficient training time in the area. The 100 nautical mile constraint has been extended to 200 nautical miles which takes into account aircraft modifications and operational changes over the past few years which have effectively extended the optimal distance to a training area.

2.2.1 Supersonic Flight Areas Selection Criteria:

Criteria established for evaluating additional supersonic flight airspace for the 388 TFW are as follows:

(1) As an optimum the area should be located within 200 nautical miles (230 statute miles) of Hill AFB to minimize the time/fuel required to transit to and from the area. Fuel consumption associated with afterburner operation during supersonic flight air combat training is responsible for limiting the best distance between home station and training area to 200 NM. This 200 nautical mile criteria is applied to the F-16 training area alternative analysis since greater distances would preclude a sufficient amount of time devoted to actual supersonic flight air combat training on each sortie. A significant reduction of training time in this manner would severely impair the unit capability of meeting mission requirements.

(2) As required by Air Force and FAA regulations, the area should be located in airspace transited by little commercial and general aviation traffic and servicing limited established airports. These criteria avoid/minimize the impact which military flight operations may have on other airspace users.

(3) The area should be very sparsely populated so that the fewest number of people are affected by the noise impact resulting from supersonic flight training.

(4) The size of the area must be large enough to allow effective use of the F-16's radar associated weapons systems. Large areas also enhance realistic tactical training by providing additional airspace for adversary aircraft to evasively maneuver and possibly avoid F-16 radar detection. Pilots at Hill AFB having experience with the F-16 feel that there should be at least one horizontal dimension allowing adversaries in simulated combat a distance of 40 to 50 miles between them. In addition, a large area for supersonic training is highly desirable because when the aircraft operates over a large geographic area, the booms would be widely dispersed. Consequently, the number of booms perceived by any single location would be significantly reduced.

(5) Operational altitudes available for the area must be low enough to accommodate realistic training but not so low as to conflict with effective

air route traffic control and general aviation traffic. In addition, since ground sonic boom effects are inversely proportional to the altitude of the aircraft above the ground, the minimum operational altitudes must be a compromise to allow realistic training while minimizing the sonic boom effects on the public beneath and adjacent to the airspace.

2.2.2 No Action:

Acceptance of the No Action option would limit local F-16 supersonic training to the existing supersonic flight area in the southern portion of the Utah Test and Training Range (UTTR). Due to high priority national research and development projects, special exercises and F-16 air-to-ground training, the UTTR supersonic flight area may sometimes be unable to accommodate the local supersonic F-16 air-to-air sorties. During these periods when air-to-air training could not be scheduled for the existing supersonic flight airspace, these F-16 sorties would be flown in restricted airspace outside of DOD property and in surrounding MOAs (including the entire Gandy Range Extension) where subsonic flight restrictions would significantly degrade realistic tactical training.

On F-16 air-to-air training sorties scheduled out of existing supersonic flight airspace, pilots would be denied required combat training in the aircraft performance envelope above Mach 1, the speed of sound. Mission training effectiveness would suffer because much of the pilots attention would be devoted to restricting the aircraft to subsonic speeds. Since pilots must continually reference the cockpit airspeed indicator to avoid supersonic flight, full concentration on the specific mission learning objectives would be impaired. Most importantly, with no supersonic flight training on a large percentage of the F-16 missions, the opportunities for pilots to develop, practice and refine sound combat tactics and habits in the supersonic flight regime would be curtailed resulting in reduced combat effectiveness and survivability.

The impact of no action may mean that we accept a training program that is not totally responsive to known wartime threats. If F-16 combat pilots are to be prepared to defend the national interest of the United States, peace time training programs must be realistic and tailored directly to expected threats. When aircrews are required to train in a manner different from that required for combat, the wartime effectiveness and survivability of that weapons system is degraded. The key element missing from Hill AFB F-16 realistic training is the capability for supersonic flight on every tactical mission. Until this deficit, affecting both the quantity and quality of aircrew combat training is resolved, the 388 and 419 TFW will be unable to maintain optimum combat capability.

2.2.3 Use of Entire Gandy Range MOA and Adjacent Restricted Airspace:

This alternative was originally the preferred alternative discussed in detail in the Gandy Range DEIS. The use of the entire Gandy Range MOA and adjacent restricted airspace remains a viable alternative and best meets the operational needs of both the 388 and 419 TFW. However, the Air Force appreciates and recognizes the concerns raised during the public comment

period and no longer views this alternative as the preferred alternative. In response to the information received from the public the Air Force has reduced the scope of its proposed action by more than one half. The new proposal is more responsive to the concerns raised by the public but is not as operationally acceptable and accommodates fewer sorties.

Minor changes regarding the number of sorties are reflected in this section. Additionally, changes have been made to the text to enhance the clarity of the material and reflect recent changes to restricted airspace boundaries.

This alternative provides for the establishment of a larger area of supersonic flight by adding onto the existing southern supersonic flight airspace (Figure 4.2). The majority of the airspace being sought for supersonic flight is now within restricted airspace. It includes the area designated as the Gandy Range Extension Military Operating Area (MOA) and the adjacent restricted airspace to the east currently not approved for supersonic flight. The Gandy Range Extension is an established MOA from 100 feet above ground level (AGL) to 18,000 feet above mean sea level (MSL), and an Air Traffic Control Assigned Airspace (ATCAA) from 18,000 feet MSL to 58,000 feet MSL. The adjoining portion is currently within airspace restricted for military operations from ground level to 58,000 feet MSL. Subsonic aircraft training is currently conducted in this airspace which overlies the Utah-Nevada border. The proposed operating area overlies the Utah-Nevada border and more specifically, overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada as shown in Figure 4.2. Under this alternative, the Air Force would to conduct aircraft training at supersonic speeds in this airspace while operating above 5,000 feet AGL. Subsonic training will continue in this airspace.

The majority of the training will be conducted by the 388 and 419 Tactical Fighter Wings (TFW) stationed at Hill Air Force Base (AFB), Utah, using the F-16 aircraft. Although other type aircraft will participate in training exercises within the proposed airspace, their usage is estimated to be less than 10 percent of the F-16 usage. Under day-to-day operations schedulers will normally fully utilize the airspace, with approximately 750-922 air-to-air sorties per month scheduled out of Hill AFB for the proposed airspace. For optimum training all of these sorties should be flown in airspace approved for supersonic flight. It is estimated that this represents the heaviest scheduling conditions. All supersonic flight activity will be logged on Air Force Form 121 in accordance with Air Force Regulation (AFR) 55-34. All flights will be conducted under visual meteorological conditions (VMC) during daylight hours.

Normally, the aircraft will remain at supersonic speeds for only short periods of time averaging about 15 seconds. Previous Air Force operational experience with the F-15 indicates that the aircraft were supersonic 2.5 times per sortie with less that one third (0.3) of the booms created reaching the ground. Previous experience also indicates that 10 percent of the sorties scheduled in airspace approved for supersonic flight never actually obtain supersonic speeds. Since the F-15 and F-16 use similar air-to-air

training scenarios, the characteristics of the F-15 will be used for the F-16 in this document.[41] Therefore, assuming 22 operational days each month, there will be approximately 110 booms created per day within the proposed supersonic flight airspace under full use. The ground beneath the airspace, approximately 3,030 square miles, would probably be subjected to only 33 booms per flying day.

When in airspace with radar coverage, a flight that drifts toward the edge of the supersonic flight airspace will be warned by the 299th Communications Squadron over UHF radio. As a backup, flight leads will use ground references combined with the F-16's Inertial Navigation System to remain within the area. As shown in Figure 4.2, this alternative supersonic flight airspace is adjacent to and partially within an existing restricted airspace, much of which is located over Department of Defense property that makes up part of the land area of the UTTR.

Because of it's location, the proposed supersonic flight airspace is used extensively by aircraft moving into and out of ground target and air combat training areas within the inner portions of the UTTR. It is estimated that 70 to 80 percent of the aircraft performing training in the southern portion (that portion south of Interstate Highway I-80) of the UTTR pass through some part of the Gandy Airspace during their mission. Many of these ingress and egress type operations occur beneath the altitude proposed for supersonic flight, all these flights will continue whether or not the proposed action is ultimately approved.

As might be expected, now that the HAMOTS Upgrading System (HUS) tracking equipment is installed, the HUS arena is generally the area of first choice for scheduling air-to-air sorties. Looking at the geography of the land area below (see figure 5.0). Combat maneuvers will generally take place over three separate areas. This is because pilots will normally choose valleys or flat areas to work over so they can maneuver in their optimum elevation region (around 20,00 feet MSL) without worrying about mountain peaks cutting down the safety buffer or depth of airspace below them. The three areas are in the north, over the antelope valley area, and south of the Kern and Deep Creek Mountains. The north and middle areas would both lie within the HUS arena. The eastern side of the entire area will also increase the space available for combat maneuvers now being flown in existing supersonic flight airspace.

The existing supersonic flight airspace over the southern range will frequently be overloaded with tests, exercises and air-to-ground sorties. During these periods, particularly if approved for supersonic flights, the alternative supersonic flight airspace would be scheduled for most of the air-to-air sorties. The southern portion of the airspace for this alternative is not within the HUS arena and as such will be the last choice scheduling air-to-air sorties.

2.2.4 Other Areas for Supersonic Flight Training:

2.2.4.1 Training Areas Evaluated for Supersonic Flight:

The only airspaces available as alternatives for the proposed action are those MOA's and restricted airspaces making up the Utah Test and Training

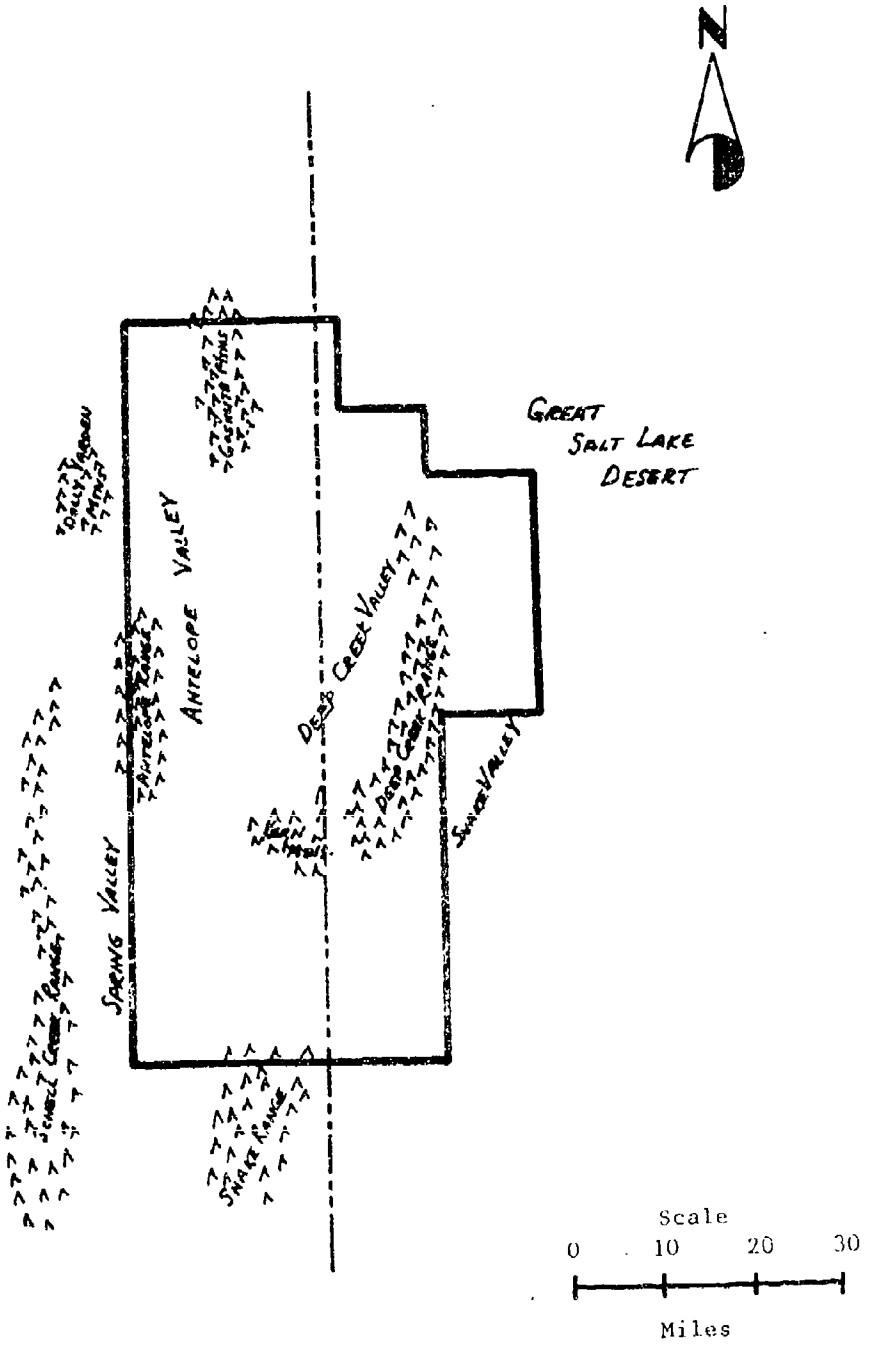


Figure 5.0
Topography of
Original Proposal

Range as shown in Figure 6.0. Because of Hill Air Force Base's geographic location, establishing a new airspace as a supersonic flight MOA was not considered as a potential alternative. Areas north and south of Hill are relatively high population areas and to the east are mountain ranges which are not only heavier populated than the areas around the UTTR, but are generally considered of more recreational value than the desert areas to the west. These land use constraints, plus conflicts with commercial airways, limit the area of study to the desert regions west and southwest of the Great Salt Lake and Hill AFB.

2.2.4.1.1 Lucin Military Operations Areas (West and North of R-6404):

The Lucin MOA's are located in the northern end of the UTTR as shown in Figure 6.0. This area is closer than the Gandy Range, but is less acceptable according to the other selection criteria.

This area is transited by several commercial airways and to avoid these airways the supersonic flight airspace would be severely restricted in size and therefore usage. In fact the Lucin MOAs only reach up to elevations of 7,500 and 9,000 feet MSL because of the commercial airways. Airspace above these limits is not currently designated as military operating areas. Although the land area under this airspace is definitely rural in nature (portions directly west of R-6404 consist of Salt Flats), the areas above desert flats probably have higher population densities than land areas below the Gandy airspace. Besides numerous farms and ranches, this area the includes the communities of Montello, Lucin, Etna, Cobre, Grouse Creek, Rosetta and Park Valley. Among these, the only towns listed with a population in either the 1982 Rand-McNally Commercial Atlas or the 1980 US Department of Commence Census, were Montello with 180, Cobre with 10, Grouse Creek with 105, and Park Valley with 35. Certain land areas beneath this MOA have already proven to be very sensitive to the noise created by existing low level aircraft activity. In the past several years, there have been noise complaints centering out of the Montello, Nevada and Park Valley, Utah areas. There has been alleged damage to chicken ranching reported from the Montello area.

Pilots stationed at Hill generally feel the topography of this area does not lend itself to air combat maneuvers as well as does the proposed or the original proposal. Pilots will occasionally use mountains or mountain ranges for "masking" purposes before actually "popping-up" to perform air-to-air intercepts. Also, this airspace is not as appropriate as the proposed airspace for intercepting flights staging out of Michaels Army Air Field at Dugway or out of Nellis AFB at Las Vegas. In addition, none of this airspace can make use of the elaborate tracking equipment which will make up the HUS Arena. Even the Gandy Range is not totally within the HUS Arena but because a good portion of it is, more of the Arena can be used to its fullest capability. Because there are more residents beneath this airspace than the proposed airspace, there appears to be no significant environmental advantage to this alternative. Because of the lack of vertical dimension there is no operational advantage to this alternative.

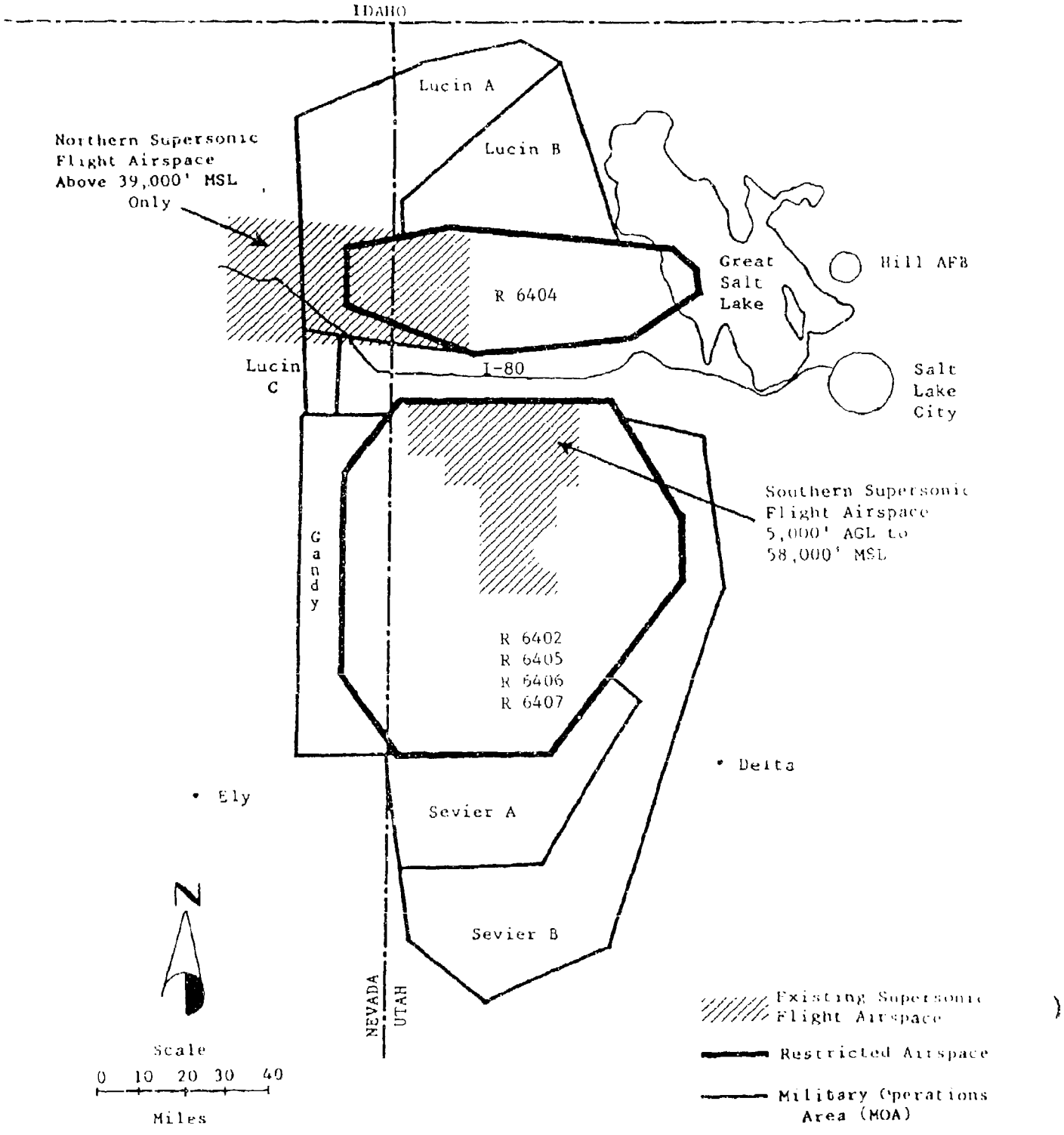


Figure 6.0

Utah Test and Training Range

2.2.4.1.2 Restricted Airspace R-6404:

This restricted airspace meets all the selection criteria except size. Commercial airways border the north and the south sides of this airspace and air-to-ground training tied to the DOD property below further restrict the airspace that might be used. This airspace is small to begin with; when the size is further reduced by conditional restraints it becomes unacceptable.

2.2.4.1.3 Restricted Airspaces R-6402 and R-6405:

Together these airspaces meet the selection criteria; separately they become prohibitively small. However, constraints in these areas do reduce them to an unacceptable size. The western edge of R-6402 is part of the UTTR already approved for supersonic activity and would provide no additional carrying capacity. The northern portion is over DOD land operated by the U.S. Army. This portion of land contains numerous land targets as well as Michaels Army Air Field and Dugway. Usage of this land area restricts it from consideration for supersonic flight airspace above. Also Fish Springs National Wildlife Refuge is located below the border of R-6402 and R-6405 as well as a historical Pony Express and Stage Route which leads to Callao and which has several historical sites. Although no damage would be expected, these areas would be subjected to sonic booms under this alternative. In addition, none of this airspace can make use of the elaborate tracking equipment which make up the HUS Arena depicted in Figure 3.0. If the area of Dugway and Michaels were avoided, this alternative would appear to impact less residents, but operationally, the airspace could not take best advantage of existing facilities and would not be large enough to accommodate the daily training load.

2.2.4.1.4 Sevier Military Operations Areas:

These MOAs are located as shown in Figure 6.0. The narrow strip to the east is above or near several populated areas including the housing area for Dugway Proving Grounds and would be inappropriate for supersonic activity. The southeast side is not only adjacent to the populated area of Delta, Utah, but it borders heavily used commercial airways between Southern California and Salt Lake City. The bulk of these MOAs is located directly south of R-6405. Much of it is about the same distance from Hill AFB as is the outer most corner of the Gandy Range, but the southern edge is even further away. The Sevier A and B MOAs only reach up to elevations of 14,500 and 9,500 feet MSL respectively. Airspace above these limits is not currently designated as military operating areas.

2.2.5 Use of Distant Supersonic Flight Airspaces:

One alternative considered was to use airspace belonging to another base on a joint schedule with the host units. The closest such airspace to Hill AFB is the Nellis AFB Range Complex which is located north of Las Vegas Nevada, approximately 320 miles southwest of Hill AFB. Due to the distance from Hill AFB, aircraft would have to deploy to Nellis for supersonic flight training. However, the training requirements are not satisfied because the continual scheduling demand for Nellis range airspace by the Tactical Air

Command Exercise Red Flag and the flying units stationed at Nellis AFB results in near 100% use of the areas during the daylight hours (Supersonic flight training is only conducted during daylight hours). Another factor against a deployment to Nellis is the cost of moving and supporting personnel away from their assigned base, cost of moving and maintaining spare equipment, and significant family separation hardships.

Similiar arguments exist for deploying to any other base with airspace approved for supersonic flight. Nellis is the closest to Hill AFB, a more distant deployment would cost more money and still be inhibited by lack of slack in scheduled range time at the deployed location. No deployment alternative was acceptable.

2.2.6 Relocate the 388 TFW:

In the environmental evaluation for the beddown of the F-16 aircraft at Hill AFB, 89 bases were evaluated as alternative locations. Hill was considered to be the optimum location for the F-16 aircraft beddown based on the following criteria:

(1) Suitable air-to-air/air-to-ground ranges located in close proximity.

(2) Availability of supersonic flight airspace over sparsely populated areas.

(3) Beddown without relocation of existing mission/missions. To avoid excessive facility and relocation costs, the beddown of a weapons systems should avoid the requirement for a double move.

(4) Existing base support facilities requiring only limited new construction to accommodate F-16 training/operational requirements.

(5) Minimum adverse environmental impact. A beddown site should be selected which keeps adverse impacts on the environment to a minimum. Air and noise pollution, urbanization of the area around the base, civil and general traffic and the capability of the base and surrounding communities to accept a change in population are factors considered.

It is the Air Force's contention that Hill AFB is still the optimum location for the 388 TFW and its F-16 aircraft. The economics have now shifted even more in favor of Hill since facility construction and modification have already taken place to accommodate the F-16 mission. Although the construction and modification cost about $10 million, the 388 TFW is now assigned about 617,000 square feet of facility space at Hill that has an inventory value in excess of $35 million. It is unlikely that any other installation could meet this type facility requirement without starting a chain reaction of existing mission relocations.

Relocating the 388 TFW would have an adverse impact on the economy of the Hill AFB vicinity. As of March 1983 the 388 TFW had an annual payroll in excess of $47 million. Although this payroll goes almost entirely to military personnel, a sizeable portion of it can be expected to filter into

the area economy. Relocating the 388 TFW without a similar replacement mission would leave a noticeable gap in various market places such as housing and retail stores around Hill AFB.

Because of the small number of aircraft assigned, relocation of the 419 TFW was not considered as an alternative because it would not change the scope and need for the action.

2.2.7 Change the Geographic or Vertical Limits of the Proposed Supersonic Flight Airspaces:

Another alternative evaluated was changing the area boundaries or vertical working altitudes so that certain ground locations are removed from supersonic overflight. The following paragraphs address the ramifications of geographic area boundary and vertical altitude changes.

2.2.7.1 Geographic Boundary Changes:

The first option in terms of area boundary change involves increasing the size of the area so as to disperse the effects of sonic boom activity over a larger area. Although this would expose more people to the sonic boom activity, any specific location should encounter fewer sonic booms due to the dispersion. No area expansion is possible to the north because of the town of Wendover and existing commercial airways. Any expansion to the south would encompass the Mount Moriah area (identified as a sensitive area in section 4.3.2.1) and would put the supersonic flight airspace closer to the community of Baker. Expansion to the west appears feasible, but again, this would be expanding the airspace in a direction further from Hill AFB and it would place supersonic flight activity closer to the communities of Currie, McGill, and Ely. The area to the east of the north end of the proposed airspace is already airspace approved for supersonic flight. The remaining airspace to the east is already airspace restricted for military usage and has been addressed in the section discussing alternate locations.

The second geographic change option would be to reduce the size of the area so as to remove certain populated areas from the supersonic flight training area. Imposing area restrictions is preferable over a complete relocation of the area boundaries so that existing airspace, although for subsonic speeds, remains useable. However, the land area involved is so rural in nature that it would be difficult to find any areas of concentrated population to avoid. The place where the largest portion of the area's population is known to exist is the Goshute Indian Reservation which surrounds the community of Goshute. Even here, the population appears to be distributed throughout the reservation.

2.2.7.2 Vertical Altitude Changes:

The perceived effects of sonic booms are directly related to the altitude of the supersonic aircraft. As the aircraft's altitude above the ground increases, the resulting sonic boom noise and overpressure effects decrease. The higher the minimum altitude, the less impact supersonic flight will have on the public beneath the airspace. This relationship along with the training

requirements of the F-16 were considered in establishing the minimum operating altitude at 5,000 feet AGL. The training scenario for F-16 air-to-air combat maneuvers calls for a floor of 5,000 feet AGL. This gives the aircraft an adequate safety buffer from the ground but still allows the aircraft to fly at elevations where experience is required for realistic training. It is estimated that most sonic booms will be created at about 15,000 feet AGL. If the airspace below this level was significantly restricted more than by the 5,000 foot minimum, pilots would be forced to employ the aircraft in higher altitudes where low air density causes reduced engine/airframe efficiency and decreases the maximum performance of the aircraft. Although operation at altitudes above 30,000 feet MSL is tactically sound during the initial intercept phase, as the engagement progresses into a three dimensional "dog fight" all participants must decrease altitude to utilize the maximum acceleration and turning performance of their aircraft.

The alternatives that will receive additional consideration in Chapter IV include no action, other airspaces within the UTTR, and vertical dimension changes to the proposed airspace. The other alternatives identified in this section are considered to be either economically impractical or to degrading to the 388 TFW's deployment posture to receive additional attention.

III. AFFECTED ENVIRONMENT:

3.0 General:

The airspace making up the proposed action involves only the northern half (roughly) of the airspace, described in the DEIS. Boundaries of this alternative are shown in Figure 7.0.

3.1 Existing Site Characteristics:

3.1.1 Population:

Under the proposed alternative the total population impacted is estimated to be less than 50. The highest known concentration of individuals is located in the community of Gold Hill, shown in Figure 8.0. Gold Hill is a small mining community with a migrant population. Individuals return to the small community in the summer months to conduct mining operations. Its estimated average population is thirty. The remaining known population is limited to the ranches and houses shown on Figure 7.0.

3.1.2 Topography:

The land area below the proposed supersonic flight airspace is located in a area o the Western United States often referred to as the "Great Basin" which is within the site of the ancient Lake Bonneville. As part of this basin, it resembles most of the other parts of Nevada and Western Utah in having nigh mountain ranges, running north and south, cut by narrow valleys. There are no large bodies of water in the area beneath the airspace; the water system being confined to mountain streams and small lakes. The ranges and valleys within the area are shown in Figure 9.0. The largest valleys are Antelope Valley and Deep Creek Valley. The area also contains the Goshute Mountains, the Antelope Mountain Range and the Deep Creek Mountains. The highest mountains in the area belong to the Deep Creek Range rising 7,800 feet above the Great Salt Lake Desert on the east to a maximum of 12,109 feet MSL on Ibapah peak. Most of the area's population is in valleys that vary in elevation from about 5,000 to 6,000 feet MSL. The entire area is considered arid; however, because of their height, the Deep Creek Mountains catch many of the storm clouds moved by the prevailing winds from the west and cause them to drop moisture on the western slopes. As a result, Deep Creek Valley is better watered than most valleys in Nevada.[22] Several mountain streams flow down to form the Deep Creek and there are many natural wild grass meadows. This is the first fertile valley west of the great salt flats, and is somewhat of an oasis even though still being considered an arid valley.

3.1.3 Vegetation:

The valleys are covered with typical desert shrubs, greasewood, sagebrush and scattered grasses which, in some instances, are suitable for grazing. In the area of the Deep Creek and Goshute Ranges, because of increased altitude and precipitation, the valley vegetation gives way to the pygmy

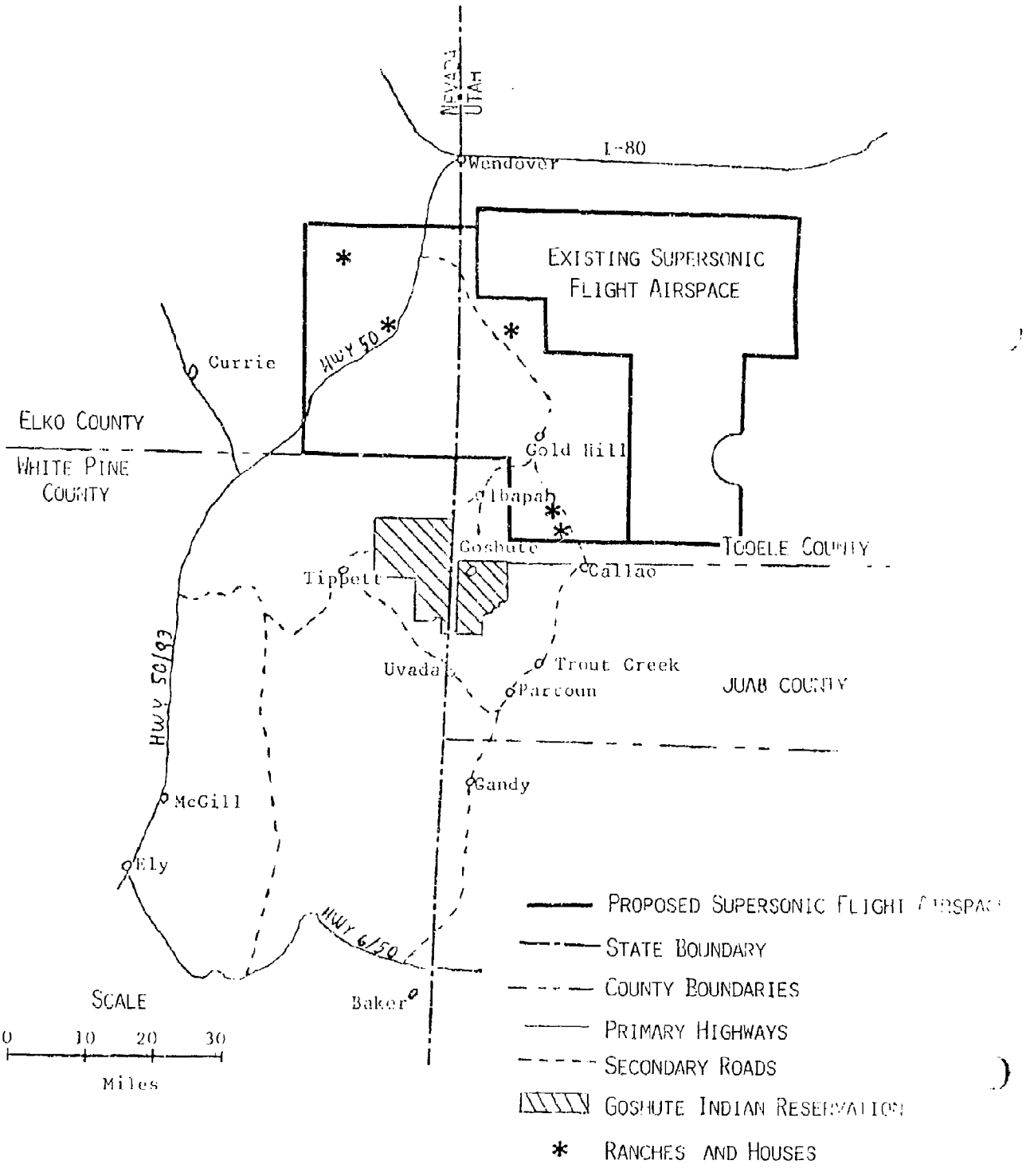


Figure 7.0
Proposed Supersonic Airspace

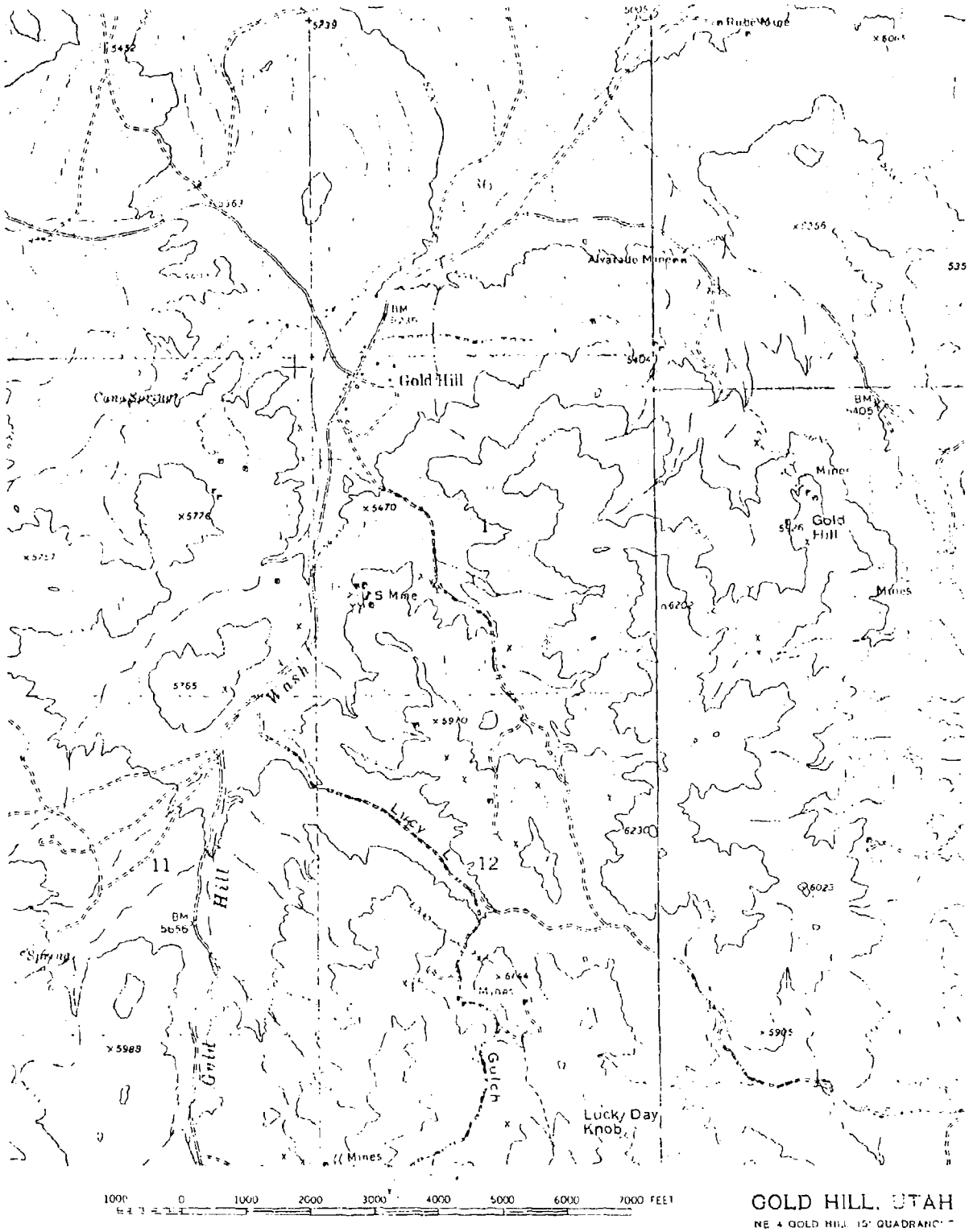


Figure 8.0
Gold Hill Utah

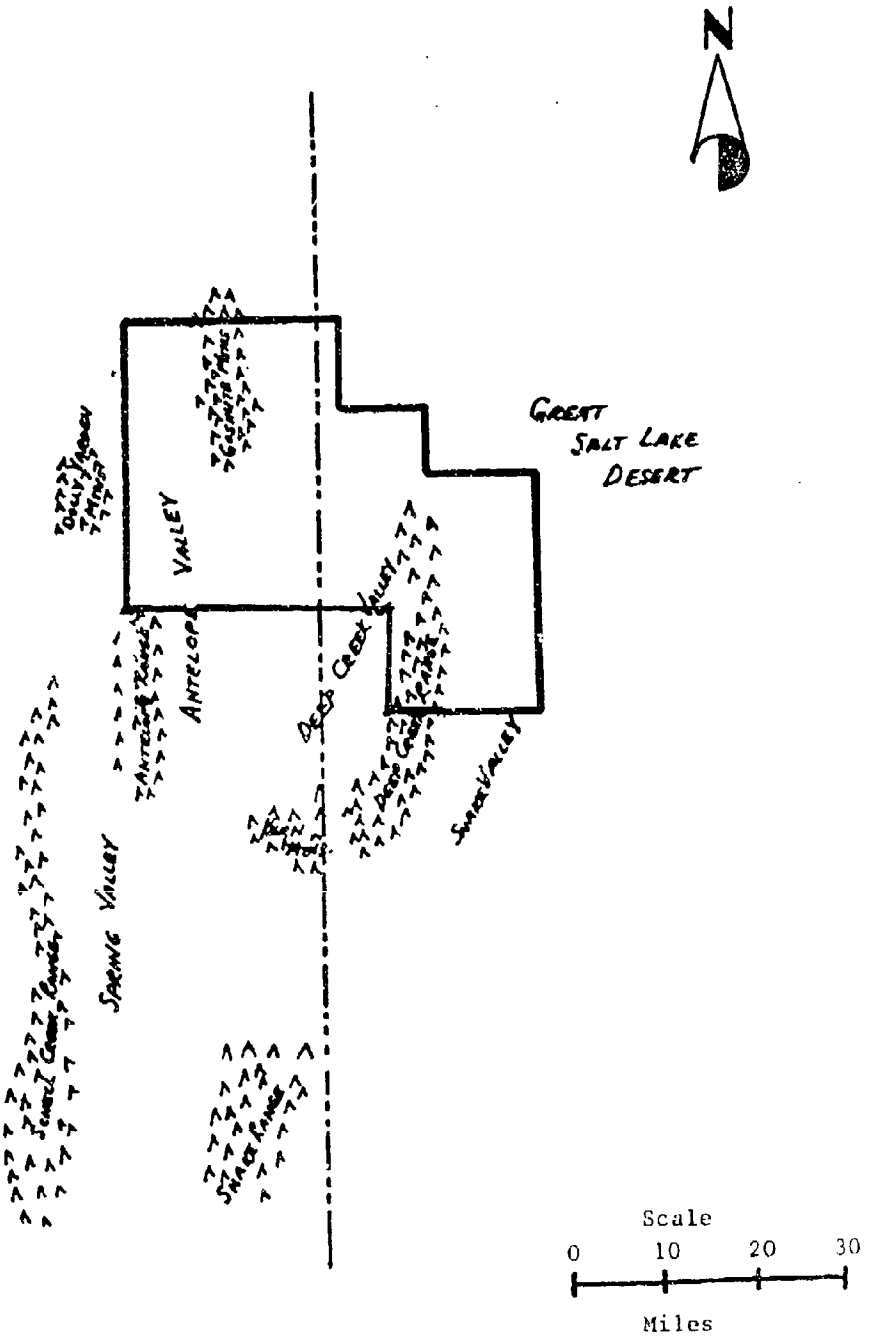


Figure 9.0
Topography
Proposed Action

forest community (juniper and pinon pines) on the higher slopes and the subalpine community (pine, spruces and quaking aspens) in the summit area. Other mountain ranges have similar vegetation sequences but most other areas do not reach the subalpine community because of lower elevation and less precipitation.[31]

3.1.4 Animals:

3.1.4.1 General:

Sheep and cattle are the predominant domestic animals inhabiting the area. Horses are also present in some areas. Wildlife in the area includes not only small mammals and reptiles, but also antelope, transplanted bighorn sheep, mule deer, bobcats, mountain lions and other carnivore ranging from coyotes to ermine. Additionally, sightings of numerous raptors and other avian species have been documented, including observations of high densities of golden eagles year-round. This area is also winter habitat for bald eagles. Information now being accumulated on raptors indicates the area around the Utah-Nevada border is within the migratory pattern of several types of raptors. The Fish and Wildlife Service reports that as many as 10,000 raptors passed through the area of the Goshute Range during late September and early October of 1983.

3.1.4.2 Threatened and Endangered Species:

The Utah Division of Wildlife Resources (DWR) has identified two endangered species as occurring within a 50 mile radius of Hill AFB and the Utah Test and Training Range; the peregrine falcon and the bald eagle. The Elko (Nevada) District Office of the Bureau of Land Management (BLM) identified four animals as occurring on the Nevada side of the Utah Test and Training Range and on the threatened and endangered species list: the peregrine falcon, the bald eagle, the spotted bat and the steptoe dace. Although difficult to identify the exact population size and extent of these species, it appears that of the four, only the bald eagle may frequent the area of the proposed supersonic flight airspace.

1. American Peregrine Falcon (Falcon peregrinum anatum): Nesting apparently occurs throughout northern Utah and into Nevada. Habitat consists primarily of cliffs and rock bluffs, below 7,000 feet elevation, and in proximity to a significant body of water. According to a 7 December 1977 letter from the DWR, there have been five documented sightings of the peregrine falcon in the area of northern Utah since passage of the Endangered Species Act of 1973. The letter also identified five historic eyries occurring within this area and two candidate parcels of "critical habitat", designated as such for possible reintroduction of natural reoccupation by wild stock. None of the locations identified in sightings, as historic eyries or as critical habitat, are within the subject airspace. However, one of the historic eyries is in the area south of Wendover, beneath the proposed airspace.[44] In addition, the Department of the Interior reports that a peregrine falcon was observed within the boundaries of the proposed

supersonic airspace during the summer of 1983 flying above the Goshute Mountains higher than the 8,000 foot elevation.

2. Southern Bald Eagle (Haliaeetus leucocephalus): Year-long habitat is restricted to the Goshute Mountain Range and to several areas west of the area of interest. Winter habitat in Nevada listed as crucial to this bird occurs at the south end of the Goshutes and in the Dolly Varden Mountains to the west. Each winter large numbers of bald eagles spend a portion of their annual life cycle in Utah. Little use is made of the relatively barren west desert of Utah which is in a 50 mile radius of Air Force Range areas. However, there are published accounts of significant numbers of bald eagles occurring in the area of Vernon, Utah, which is about 62 miles east of the proposed supersonic flight airspace and there have also been sightings within Range boundaries, by Air Force personnel and by State and Federal wildlife specialists.

3. Spotted Bat (Euderma maculatum): This bat is not on the federal list but the states of Nevada and Utah are interested in it because it occurs in a limited range. The limiting factor on the distribution of this species is thought to be food, as it feeds exclusively on small moths. Areas of distribution have not been well defined, but are thought to include the country around Wendover.

4. Steptoe Dace (Relictus solitarius): This fish is found in waters that were tributaries to the ancient Bonneville Lake. There are 12 known sites in Nevada that presently support populations of this fish. One site is located approximately 20 miles west of the Utah/Nevada border and one mile south of the Elko/White Pine County lines. This is essentially on the border of the proposed airspace.

3.1.5 Land Use:

3.1.5.1 Grazing:

Several of the valley areas below the proposed airspace have been used historically for grazing purposes. The story of the Deep Creek Valley is similar to many areas in the west, where cattle first dominated the range lands. Then the cattle empires were cut down by fencing of the range lands and sheep ranching. Sheep then dominated the valley until the early 1900's. The Taylor Grazing Act cut many large sheep ranches into smaller ones and forced small ranches out of business. Now much of the grazing land is under the control of the BLM.

The BLM controls grazing on public land by issuing grazing permits for cattle and sheep. The maximum loading for the land under the airspace varies according to area and season of the year. The loading rate ranges from 1 cow per square mile in the summer months to 7 cows per square mile in the wetter winter months.

3.1.5.2 Agriculture:

Because of the arid nature of this area, agriculture is primarily limited to areas where water is available. Most agricultural usages are small in nature, located in conjunction with and generally for consumption by the isolated residents of the area and their livestock.

3.1.5.3 Mining:

The mineralization of the area is related broadly to that of the Basin and Range. The general area is considered to be a possible source of tungsten, lead, silver and gold. Historically, the Deep Creek Range has been an area of significant mining and exploration activity, as a potential producer of gold, silver, lead, copper, tungsten, beryllium and mercury.[31] However, mining operations throughout the area are isolated and small in scale.

3.1.5.4 Recreation:

Recreational activities in the area are limited for the most part, to those activities taking advantage of its unspoiled nature. These activities include hunting, hiking, horseback riding, camping, nature study, etc. However, because of the remoteness of the area, the number of people participating in these activities is relatively small. The BLM has estimated that recreational usage of the Deep Creek Mountains, in both Juab and Tooele Counties of Utah, amounts to 6,000 visits per year totaling some 22,000 visitor hours. It is also estimated that the Pony Express Trail draws some 150,000 visits per year involving 1.2 million visitor hours. These recreational visits include primarily camping and recreational vehicle (RV) activities; in fact, the more readily accessible portions (closest to populous areas) are outside the impact area.

3.1.5.5 Tourism:

There is only one major road through the area; U.S. Highway Alternate 50 which heads southwesterly across the area from Wendover to Ely. Other roads and jeep trails in the area are primarily for access to specific locations and may lend themselves to the recreational activities described above, but probably would not be considered suitable for tourism as they do not provide facilities.

3.2 Socio-Economic Conditions:

The economy of the area depends almost entirely on ranching and the small amount of mining taking place. Due to the low annual rainfall and relatively arid conditions, the water supply is critical to the economy and the type activities that the area can support. For the most part, areas where people are located are determined by the available water.

3.3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES:

3.3.1 General:

This section addresses the affected environment and the environmental consequences of the alternatives and focuses primarily upon the original

proposal addressed in the DEIS. It has been written in a manner which facilitates comparison between the proposed alternative (northern half of the Gandy Range MOA, and adjacent restricted airspace) and the alternatives. Many of the impacts for the original proposal are identical to the proposed action, which can be viewed as a subset of the proposal generated in the DEIS, and the primary emphasis is placed on highlighting only the differences.

3.3.2 Original Proposal -- Affected Environment:

The alternative supersonic flight training airspace overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada. Its horizontal limits are the same as those of the existing Gandy MOA/ATCAAA plus the space between the Gandy MOA/ATCAAA and the existing southern supersonic flight airspace to the east. The majority (estimated at 70 to 80 percent) of the land area beneath the proposed supersonic flight airspace is public and under the jurisdiction of the Bureau of Land Management. The exceptions to this are the Goshute Indian Reservation, small scattered parcels of private land and those state lands acquired from Congress for the development or benefit of state institutions.

3.3.2.1 Population:

The area is very sparsely populated, with an estimated total of less than 350 people residing within the boundaries. Maps of the area beneath the proposed supersonic flight airspace show the towns or communities of Goshute, Trout Creek, Partoun, Gandy, Ibapah and Gold Hill in Utah, and Tippett and Uvada in Nevada. The only towns listed with a population in either the 1982 Rand-McNally Commercial Atlas or the 1980 U.S. Department of Commerce Census were Trout Creek with a population of 15 and Ibapah with a population of 25. Tippett and Uvada were listed but were identified as rural areas with no populations given. Neither reference had populations for Goshute nor the Goshute Indian Reservation; however, Utah's Indian Affairs office estimates the Reservation population at about 150 people. There are scattered ranches in the area beneath the airspace, primarily in the southern portion, but none of the populated areas are considered more than rural. The towns of McGill (population 1,900), Currie (population unlisted), Wendover (population 2,000), Callao (population 19), and Baker (population 50) are located outside of the area boundaries (see Figure 4.2). Many commentors have identified differing populations for several communities such as: Partoun, 50; Uvada, 14; Gandy, 24; Trout Creek, 20; and Ibapah, 69. However, the original estimate of 350 still appears appropriate for the total area. Also, there are 200 Goshute Indians that do not live on the reservation or in the area which consider the reservation their home.

3.3.2.2 Topography:

The land area below the proposed supersonic flight airspace is located in a area of the Western United States often referred to as the "Great Basin" which is within the site of the ancient Lake Bonneville. As part of this basin, it resembles most of the other parts of Nevada and Western Utah in

having high mountain ranges running north and south, cut by narrow valleys. There are no large bodies of water in the area beneath the airspace; the water system being confined to mountain streams and small lakes. The ranges and valleys within the area are shown in Figure 5.0. The largest valleys are Antelope Valley and Deep Creek Valley. The area also contains the Goshute Mountains, the Antelope Mountain Range and the Deep Creek Mountains. The highest mountains in the area belong to the Deep Creek Range rising 7,800 feet above the Great Salt Lake Desert on the east to a maximum of 12,109 feet MSL on Ibapah peak. Most of the area's population is in valleys that vary in elevation from about 5,000 to 6,000 feet MSL. The entire area is considered arid; however, because of their height, the Deep Creek Mountains catch many of the storm clouds moved by the prevailing winds from the west and cause them to drop moisture on the western slopes. As a result, Deep Creek Valley is better watered than most valleys in Nevada. Several mountain streams flow down to form Deep Creek and there are many wild grass meadows. This is the first fertile valley west of the great salt flats, and is somewhat of an oasis even though still being considered an arid valley.

3.3.2.3 Vegetation:

Vegetation is identical to that found under the proposed airspace boundaries.

3.3.2.4 Animals:

Same as for the proposed alternative.

3.3.2.5 Agriculture:

Identical to the proposed alternative, however, because this area is larger with a higher population density there is relatively more ranching and farming.

3.3.2.6 Mining:

Identical to the proposed action.

3.3.2.7 Recreation:

Recreational activities of this alternative are identical in type to that of the proposed alternative. However, because of the larger population density to the south, the more accessible areas are located closest to the southern half of this proposal.

3.3.2.8 Tourism:

Identical to the proposed alternative.

3.3.2.9 Socio-Economic Conditions:

Identical to the proposed alternative.

IV. ENVIRONMENTAL CONSEQUENCES:

This chapter provides general background and the environmental consequences associated with the proposed action. This proposal is designed to avoid areas of known population as much as possible.

4.1 General Background On Noise and Sonic Boom Characteristics:

Noise from supersonic operations and its effect on the human environment is the primary impact associated with this proposal. Considerable efforts have been made to quantify the sonic boom phenomena and its impact on human health and wildlife; however, to date, no one has been able to conclusively identify or dismiss potential long term impacts. The literature which has been reviewed supports the conclusion that no significant long term impacts are associated with this proposal at the levels of intensity identified. Realizing that, at a minimum, sonic booms are annoying, the Air Force has reduced the scope of the original proposal to avoid impacting as many people as possible.

Noise in the area will result from two sources: First from the aircraft itself, and then from the phenomenon produced when an aircraft exceeds the speed of sound causing a sonic boom. The aircraft in flight produces sound from two sources: engine noise and airframe noise as the aircraft moves through the air. When the aircraft is at subsonic speeds (less than the speed of sound), during operations proposed for the supersonic airspace, the noise levels will be insignificant. As an example, if 50 sorties per day were to pass directly over the same spot at 10,000 feet above the ground (a very unlikely worst case) the day-night average sound level (DNL) would be 44.3 dB. DNL is an equivalent sound level over a 24-hour period that is equal, on an energy basis, to the fluctuating noise signal under consideration (aircraft overflights) with a 10 decibel penalty added to any sounds that occur in the night. By convention, A-weighted sound exposure levels are used to calculate the DNL values. A DNL of 40 to 47 is the typical range of noise levels for a rural community. Day-night average sound levels below 55 decibels are considered by the Environmental Protection Agency[36] to have no effect on public health and welfare, and sound levels below 65 decibels are generally acceptable for residential purposes by the Department of Housing and Urban Development[37] (the goal is 55 decibels).

At the present time, subsonic operations occurring within the proposed supersonic flight airspace include: special test operations and their support aircraft, intercepts, ingress and egress flights to and from ground targets on DOD land, refueling operations, Red Flag exercises, and others. These operations often take place at elevations below the normal air-to-air combat maneuvers and sometimes below 5,000 feet AGL. Despite using lower elevations, these operations are so widely dispersed throughout the proposed airspace that the DNL created at any one location on the ground is small.

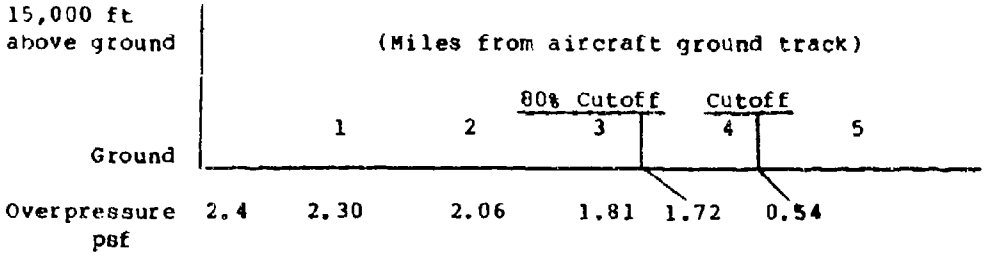
If approved for supersonic flight, aircraft involved in air-to-air training in the airspace will be at subsonic speeds during most of their flight, but

will accelerate to supersonic flight when conducting basic fighter maneuvers. In order to accelerate to supersonic airspeeds, the F-16 will use the afterburner (thrust augmentation) prior to going supersonic. Afterburner light-off results in a rapid increase of the sound level and on some aircraft is occasionally misinterpreted as a sonic boom.

When aircraft exceed the speed of sound, or Mach 1 as the airspeed is referred to, a particular phenomenon occurs that is heard by individuals within a defined range as a sonic boom. The boom is an instantaneous sound similar to a thunder clap or a rifle shot. An important consideration in the assessment of the effects of sonic booms is that not all booms created are heard at ground level. The atmospheric air temperature decreases with height above ground. This temperature gradient acts to bend the sound waves of a sonic boom upwards. Depending upon the aircraft height and Mach number, the paths of many sonic booms are bent upward sufficiently that the boom never reaches ground level. The heights and Mach numbers produced during F-16 combat maneuvering are such that less than one boom out of every three produced is likely to be heard at ground level. This same phenomenon also acts to limit the width of those sonic booms that do reach ground level. This concept of sonic boom "cut off" is discussed more fully in Appendix B.

The noise levels and the related parameter "overpressure" from sonic booms vary significantly, depending on where and how a boom is generated. The overpressure is basically a function of the distance of the aircraft from the observer, the shape of the aircraft, and the airspeed of the aircraft. The maximum overpressures normally occur directly under the flight track of the aircraft and decrease as the slant range from the aircraft to the observer increases. Because of the normal temperature gradients in the atmosphere, the sonic boom waves tend to refract or bend upward as they move away from the aircraft until at some point, out to the side of the flight path, they no longer reach the ground. This horizontal distance at which the waves no longer touch the ground is called the cutoff distance. The sonic boom wave overpressures decrease at a rate proportional to the -(3/4) power of the slant range between the aircraft and the observer until they reach a distance approximately equal to 80 percent of the cutoff distance. From here to cutoff, the wave disintegrates more rapidly. This phenomenon is described in more detail in Appendix B.

As an example, if an F-16 aircraft flying at supersonic speed and at 15,000 feet above the ground produced a sonic boom that generated an overpressure of 2.4 pounds per square foot (psf) directly beneath the aircraft, the overpressure would decay as shown below:



Knowledge of sonic booms produced in steady rectilinear flight is sufficient to allow for predictions of the phenomena. The effects of turns and maneuvers during supersonic flight have been studied by the French during exercise Jericho. The study[30] was an intensive investigation into the "focus" phenomenon. A focus boom occurs when shock waves from an aircraft in supersonic flight converge on the same point in space at the same time. The point of convergence can occur either on the ground or at some point in the atmosphere. The focus boom occurs only at a specific location and does not move as the aircraft moves. Estimates of the intensified overpressures occuring as a result of focusing range from two to five times the peak nominal overpressure.

Aircraft in supersonic flight are most likely to produce focus booms that may reach the ground while performing three particular maneuvers: linear accelerations, turns and pushovers. Other maneuvers such as pull ups, decelerations, large radius turns, and small curvatures of the flight path do not generate focus booms. Focus booms are discussed in more detail in Appendix B. In one Air Force test on fighter aircraft, 205 sonic booms were produced, of which 18 booms were reported by residents. From the evaluation of this test data, it was Galloway's [41] subjective opinion that one of the eighteen booms could have been a focus boom. The Air Force, along with other DOD services, is involved in efforts to model the situation to determine where and in what situations focus booms will be generated.

Aircraft operating at supersonic speeds will also produce shock waves that travel in the atmosphere above the aircraft. When these waves hit the region of the atmosphere where temperature increases as altitude increases (the inverse condition to what normally occurs at lower altitudes) they are refracted back toward earth. Shock waves created below the aircraft that bounce off the ground or which refract upwards before reaching the earth, will eventually go back to earth in a similar fashion. These type shock waves form a secondary boom carpet at ground level outside the primary carpet. However, they create very minor overpressures (on the order of 0.001 to 0.01 psf) and have not been associated with any significant community response or adverse impact. This phenomenon of a secondary boom carpet is discussed further in Appendix B, but it is not discussed further as a potential adverse environmental impact.

Sonic booms and their effects have been studied extensively by the Air Force, the Federal Aviation Administration (FAA), and the National Aeronautics and Space Administration (NASA). Appendix B contains a review of the literature in this area and discusses several tests conducted to determine sonic boom overpressure effects on people, structures and animals.

A simplified method for the calculation of sonic boom characteristics for a wide variety of supersonic aircraft configurations and spacecraft operating at altitudes up to 76 km (47.2 miles) has been developed. Sonic boom overpressures and signature duration may be predicted for the entire affected ground area for vehicles in level flight or in moderate climbing or descending flight paths. The outlined procedure relies to a great extent on the use of charts to provide generation and propagation factors for use in

relatively simple expressions for signature calculation. Computational requirements can be done by hand-held scientific calculators. The method is explained in detail in Appendix B. It uses basic aircraft operating conditions; Mach Number, altitude, weight, and flight path angle. The estimate provided by the method tends to be conservative; that is, the overpressure derived is the maximum possible. Other factors such as non-standard temperature and winds are not accounted for in this conservative analysis for simplicity. These factors tend to distort the sonic boom shock waves and most often decreases maximum overpressures.

The following chart shows the maximum overpressure to be expected directly under the flight track of F-16 operations in the proposed supersonic flight airspace at representative airspeeds and five altitudes. As distance from the flight track increases, the overpressure decreases as discussed earlier.

MAXIMUM OVERPRESSURE EXPECTED AT A GROUND LEVEL ALTITUDE OF 5000 FEET MSL

AIRCRAFT AIRSPEED M	ALTITUDE (MSL) OF AIRCRAFT				
	10,000	15,000	20,000	25,000	30,000
1.1	6.36 psf	3.52 psf	2.40 psf	1.81 psf	1.45 psf
1.3	7.48 psf	4.14 psf	2.65 psf	2.14 psf	1.67 psf

All these overpressures are well inside the limits of those overpressures expected to cause any structural damage other than occasional breakage of glass. Also, Air Force testing with fighter aircraft having capabilities similar to the F-16 have shown an average supersonic speed of Mach 1.106 during the short bursts of speed with only 0.3 of the booms created reaching the ground.

4.2 Proposed Action:

This section addresses the environmental impacts of the proposed action. The area comprising the proposed action is shown in Figure 4.1 and was developed in response to public comments received on the DEIS. As a result of its reduced size, the impacted population has been reduced from the original 350 to less than 50.

Because the area of the proposed action has been so dramatically reduced, supersonic flight may be randomly distributed throughout the entire airspace and there are no general areas for which concentrated activity can currently be predicted. Therefore, the use of ellipses as a general analytical tool were discarded and the impacted area is assessed as a whole using the same basic calculations.

Periodically, residents and animal life within the proposed airspace will be subjected to sonic booms. The booms will be comparable to nearly instantaneous exposure to a C weighted sound exposure level, CSEL, of about 108 decibles lasting for only a fraction of a second, not unlike a rifle

shot. In November of 1983, personnel from Hill AFB visited the current supersonic flight area and listened to sonic booms as F-16 fighter planes flew directly overhead at 5,000, 10,000, and 15,000 feet AGL at Mach 1.2. Informal measurements were taken, not taking into account atmospheric conditions. The sound levels measured ranged from approximately 110 to 120 decibels, which are comparable to the figures discussed in this document. The probability of hearing a given number of sonic booms on a single day from any one point in the proposed supersonic airspace is as follows:

Number of Booms Heard Per Day	Probability of Hearing Given Number or More Booms Per Day
0	1.00
1	0.35
2	0.07
3	0.01
4	0.01
5	0.01

Air Force statistics indicate that the average period of supersonic flight during combat maneuvers is 15 seconds. The average elevation and speed for supersonic flight for this proposal is 15,000 AGL and Mach 1.1 respectively. Typically, this would result in a boom 3.2 miles long and 3.4 miles wide on each side for a total area of 22 square miles, this average boom will occur approximately 25 times per day.

The inhabitants of sparsely populated and quiet remote areas might reasonably be expected to be less tolerant of sonic booms. Individuals outside of the proposed airspace may occasionally hear sonic booms, depending upon atmospheric conditions. Callao is about 3 1/2 miles from the edge of the area. With normal operations occuring in the proposed airspace this community will not be impacted. The community of Ibapah could be impacted by rapidly deteriorating overpressures under unusual atmospheric conditions.

The community of Gold Hill will be impacted by operations occuring in the proposed airspace. The majority of the population of this small mining community (approximately 30) are present only during the summer months.

4.2.1 Sonic Boom Effects on People:

Sonic boom tests have been conducted at overpressures as great as 144 pounds per square foot. Tests conducted in 1968 at Tonopah, Nevada, reported that sonic booms with overpressures ranging from 50 psf to 144 psf do not cause injury to people. Observers positioned directly under the flight tracks of aircraft flying at less than 100 feet above ground reported some momentary discomfort, fullness and ringing of the ears during the most intense

booms.[23] Although hearing acuity was not measured, subjects reported no observable symptoms of hearing loss or other ear involved disabilities. Exposure to loud sound without hearing protection will often be accompanied by a temporary ringing of the ears. The ringing acts as a warning of acoustic insult. There are dozens of other medical causes for this ringing, but when it is caused by a loud sound, it will subside after the exposure unless the exposure is too long or repeated too often. Other tests at lesser overpressures have reported that sonic booms do not cause permanent direct injury to people. The possibility of individual injury from falling objects or injury as a result of being startled by sonic booms has not been investigated. Personal injury due to indirect effects of sonic booms occur very infrequently, but the possibility of such effects cannot be eliminated.

Sonic booms in the proposed supersonic flight airspace will be generated by aircraft flying at altitudes in excess of 5,000 feet AGL with most booms being created at elevations from 10,000 to 20,000 feet AGL. The sonic boom overpressure at ground level for an F-16 at 10,000 feet AGL and Mach 1.1 airspeed (the average airspeed used during supersonic flight periods) would be expected to be about 3.51 psf. At 5,000 feet AGL, the lowest altitude to be allowed for supersonic training in the proposed airspace, an F-16 at Mach 1.1 would create an overpressure at ground level of about 6.36 psf. Although 3.52 psf and even 6.36 psf overpressure is well below that experienced during the tests in Tonopah, Nevada, that caused no physiological damage, tests conducted in both the United States and in Canada have demonstrated that a 4 psf sonic boom is considered annoying to most people. Section 4.1 and Appendix B contain comparison tables to show maximum calculated overpressure resulting from various supersonic speeds.

The greatest impact of sonic booms on people is an annoyance factor resulting from people being startled by the boom. The annoyance factor can be caused by a variety of factors including house rattles and vibrations, interruptions of activities, sleep, conversations, television, damage to personal property. This depends on personal characteristics and the psychological makeup of individuals exposed. Startling is also responsible for creating fear in some individuals. This fear is due to the loud, unexpected sounds that surprise the individual. Although some adaptation may be expected with repeated sonic booms, this is a primitive response and whenever an adequate stimulus occurs, a startle response ordinarily follows.

Some experiments have shown a tendency for sonic boom exposure to degrade the performance of certain visual, steering and tracking tasks, while others have shown no effect on performance.[20] Nowakiwsky (1974) subjected automobile drivers to sonic booms of 3 psf with no apparent affect on their ability to handle the vehicles. Sonic booms have also been reported to interrupt work, rest, recreation, school and other day-to-day activities. The actual acoustic masking effect of the boom is negligible because its duration is only a fraction of a second. However, the actual interruption will often last longer than the boom whether or not startle occurs; conversation and comments about the boom may continue after the fact, thought processes may be interrupted without immediate recovery, and group activities may require a short time to resume their previous business. It may take several minutes

before the interrupted activity is fully resumed and order is restored in the case of groups of individuals. The response is largely dependent upon the individual subjects and the sonic boom overpressure.

The procedure used by the U.S. Environmental Protection Agency and the Department of Housing and Urban Development[37] to assess the impact of sonic boom exposures on people relates the long-term average C-weighted day-night average sound level produced by booms to the number of people that would be highly annoyed by the booms. This procedure was developed by the National Research Council of the National Academy of Sciences through its Committee on Hearing, Bioacoustics, and Biomechanics.[38,43] The C-weighted sound exposure level was chosen in lieu of the normal A-weighted level because it provides a more reasonable measure of the low frequency sound pressures associated with high energy impulses such as those generated by sonic booms.[42] The procedure is based upon results from several laboratory studies and social surveys. One social survey was conducted in Oklahoma City where the residents were exposed to eight sonic booms each day for six months. During the course of this test, they were asked, on three separate occasions to assess their reactions to the sonic booms. Another social survey was conducted near an Army base where civilian residents were exposed daily to the noise from large artillery practice firings. Laboratory tests were designed to explore peoples' ability to judge the relative annoyance of sonic booms and subsonic jet aircraft flyovers.

No definitive stance on physiological ill-health can be made at this time. There is little doubt that noise, including sonic booms, acts as a stressor, but it is not known with any degree of certainty whether prolonged exposure results in cumulative pathology. Some research has been conducted to determine the link between noise and ill-health; however, many of these studies are questioned by the scientific community. CHABA was requested by OSHA and EPA to consider research that might be performed to examine the effects on human health from long term noise exposure for industrial workers and the general population, respectively. CHABA's conclusion was that auditory effects were fairly well defined; however, in light of the data reviewed on non-auditory effects it would be prudent to obtain more critical research. While these considerations are primarily for general audible and industrial impact noises, it is stressed that specific data on sonic booms is also needed. The EPA indicates that due to the frequency range of sonic booms, they may not be as harmful as other high frequency impact sounds.

Researchers like Kryter indicate that if ill-health can result from noise, the connection is probably due to psychological stress factors. If this is the connection and one accepts the social surveys that predict annoyance as a factor of noise levels, then one would conclude that a very low percent, if any, of the exposed people in the proposed supersonic flight area would develop non-auditory ill-health conditions.

Public commentors urged the Air Force to provide a "worst case" analysis of the potential health effects caused by sonic booms. However, specific predictions of such impacts are not possible. Additional years of reserch are needed to scientifically determine causal connections or to realistically predict generalized health effects based upon noise.

Nevertheless, it has been suggested that there are links between noise and problems such as hypertension, cardiovascular changes, increased neurologic and gastrointestinal disturbances, changes in the course of pregnancy, and changes in hormone level and other chemical balances. These effects are exemplary of conditions associated with stress. While such effects have been suggested, no method is available to predict either any specific reaction or the proportion of the community which could be affected. Although such effects cannot be dismissed, prevailing scientific opinion supports the expectation that the predicted noise exposure would not cause the effects speculated on above.

It is recognized that future research may provide a better understanding of the relationship between noise and non-auditory ill-health; however, in the interim, decisions must be based on the data supported by the scientific community.

4.2.2 Sonic Boom Effects on Animals:

Several agencies and organizations, including the States of Utah and Nevada, have expressed concern over the proposed action's impact on fish and wildlife. Since these impacts are limited to those resulting from the sonic booms, they are addressed in the following paragraphs. In summary, it is anticipated that the proposed action will have no adverse impact on the bald eagle or peregrine falcon beyond those which may already exist due to the present low level operations by military aircraft. There has been one documented sighting of the peregrine falcon in the area of concern, and the bald eagle is known to frequent some of the area. The impact on the spotted bat is unknown as, according to BLM, the extent of its distribution is also unknown. Sonic booms do not appear to pose a threat to fish or fish eggs. Within the proposed airspace there is a population of steptoe dace, an endangered species. However, no impact on this species is anticipated. Another animal species of possible concern is the rare Snake Valley (Utah) cutthroat trout for which the Deep Creek Mountains is one of the few remaining areas of existence. The State of Utah has expressed the concern that the number of sonic booms impacting this habitat may result in landfalls and landslides which could block creeks, prohibiting fish movement and reproduction. It is unlikely sonic booms would impact geological formations. Normal supersonic operations should have no impact on this habitat.

Although domestic livestock have been observed during exposure to sonic booms, their reactions have not been conclusive and in most cases, indicated only recognition of a sound stimulus. One study indicated that sooty tern reproduction rates were severely reduced when the eggs we exposed to intense sonic booms with overpressures 100 psf or more. Generally, though, the magnitude of animal responses to sonic boom overpressure normally experienced has been slight.

Avain species will occasionally run, fly or crow. A series of tests conducted at the Agricultural Research Center, Beltsville, Maryland, also concluded that the behavior reactions of large animals to the sonic booms

were minimal. It was, however, noted that the reactions by animals were more pronounced to low flying subsonic aircraft than to booms. The reactions were of similar magnitude and nature to those resulting from flying paper, the presence of strange persons, or moving objects, which may indicate that stress may be pronounced when an object is seen. Observations reported by U.S. Fish and Wildlife Service (USFWS) personnel regarding responses of big horn sheep on the Luke Air Force Range, Arizona, to sonic booms indicate minimal impacts or disturbance to the sheep. These observations are listed in Appendix B.

Wild animals known to live in the region include small mammals, reptiles, antelope, mule deer, bobcats, mountain lions and other carnivore ranging from coyotes to ermine. Also, there have been documented sightings of numerous raptors and other avian species, including observations of high densities of golden eagles year-round and bald eagles using the area for winter habitat. Other wildlife in the area is characteristic of the western desert and mountain area. The only potential impact of the proposed action that might affect these species is the sonic booms resulting from the proposed training. Generally, the most delicate and sensitive behavior of animals is that associated with biological reproduction. Although sonic booms may, under extreme and unusual circumstances, affect this behavior, neither modification of reproductive behavior nor adverse animal responses have been related to the type and magnitude of sonic booms that would be experienced beneath the proposed supersonic flight airspace.

A study[40] conducted in 1980 and 1981 under cooperative agreement between the USFWS and the Air Force, involved data gathering at 40 breeding sites of 8 species of raptorial birds in an effort to record responses to low level jets and sonic booms. Falcon and eagle species were subjected to a total of 1000 jet passes and over 100 real or simulated booms. During the 1980 portion of the study, boom responses were recorded at 15 eyries for 9 species (including 3 peregrine falcon eyries) and low level jet responses were recorded at 19 eyries (including 5 peregrine eyries) for 7 species. The objective in each experiment was to simulate a worst case situation (i.e., booms louder than normal or repeated passes with aircraft lower and closer than would be expected in routine low level maneuvers). The rationale being that if severe behavioral responses could not be generated in the worst case experiments, then one could logically conclude that responses to less intense stimuli would be less severe. The second year of the study concentrated on the peregrine falcon and its closest Arizona kin, the prairie falcon. Four pairs of prairie falcons were subjected to extreme test situations (i.e., the daily maximum for jet passes was 42 at one eyrie, and 23 booms at another) during the courtship and incubation phases of the nesting cycle, when they were most likely to abandon. All phases of the breeding cycle were also tested in the peregrine. Finally, all sites tested in 1980 were revisited to determine reoccupancy rates. The conclusion of the study with regard to sonic booms are: (1) small nestlings do not respond noticeably, (2) large nestlings are alerted or alarmed; less often young will cower, (3) occasionally adults respond minimally if at all to loud booms, and (4) adult behavior indicative of site abandonment was not observed. The report further summarized by stating,

"...while the birds observed for this study were often noticeably alarmed by the subject stimuli, the negative responses were brief and never productivity limiting. In general, the birds were incredibly tolerant of stimulus loads which would likely be unacceptable to humans."

Under the heaviest loading conditions expected, the land area beneath the airspaces identified earlier may experience as many as 25 sonic booms on a weekday. Any single location beneath the airspace will be subjected to only a portion of this number. Considering the relatively high altitude of the sonic boom activity and low numbers of sonic booms expected to be perceived by a single ground location within the area, the anticipated noise impact on endangered species and wildlife appears to be slight.

Cottereau of the National Veterinary School of Lyon, Lyon, France, reports in all the studies concerning sonic booms, whether real or simulated booms, the authors came to the same general conclusions: Sonic booms and subsonic flight noise has very little effect on the animals behavior. He goes further to say about sonic booms, "Chronic direct effects on wild animals have not been investigated, but no significant effects of this kind are presently foreseen."[15]

An FAA study[19] completed in 1973 arrived at the following conclusions:

1. Animal damage claims are only a very small fraction of the total damage claims that have been submitted to the Air Force.

2. The behavioral reactions of farm animals to sonic booms are, for the most part, minimal.

3. All experimental evidence to date indicates that the exposure of mink to sonic booms does not affect reproduction.

4. All experimental evidence to date indicates that the exposure of chicken eggs to sonic booms does not affect their hatchability.

5. Sonic booms do not appear to pose a threat to fish or fish eggs.

6. Knowledge concerning the effects of sonic booms on wildlife is limited, but it appears that sonic booms do not pose a significant threat. While available data indicates wildlife and animals demonstrate limited response and no nestling death or eyrie abandonment, questions on long term protracted exposure and sublevel responses remain to be studied.

4.2.3 Sonic Boom Effects on Structures:

Three large scale tests account for the bulk of recorded data available in describing structural response to sonic boom overpressure. The most intensive test was conducted at White Sands, New Mexico, where 21 structures of various design and construction were instrumented and then exposed to more than 1,500 sonic booms with overpressures as high as 20 psf.[27] No damage was detected for overpressures up to 5 psf, nor was there evidence of any cumulative damage effects after a series of 806 successive flights at

about 5 psf. The only evidence of damage at the conclusion of the tests, other than glass breakage, was three bricks that had loosened beneath a window ledge. Additional details on the White Sands study along with details on the other two large scale tests are provided in Appendix B. The results of the three large scale sonic boom structural tests and several other tests were analyzed by NASA. In their conclusion they make the following statement:[8]

> The extensive series of overflight tests have provided valuable data on the order of magnitude of responses to be expected. These tests show that building structures in good repair should not be damaged at boom overpressures less than about 11 lb/ft.^{2} However, it is recognized that considerable loading variability occurs, owing to atmospheric effects, and that the residual strength of structures varies according to usage and natural causes. Thus, there is a small probability that some damage will be produced by the intensities expected to be produced by supersonic aircraft.

By far, the largest percentage of sonic boom damage claims stems from broken or cracked glass damage. All of the tests conducted in the United States have confirmed that glass damage is the most prevalent damage caused by sonic booms.[16] As addressed in Appendix B, predicting whether or not glass will break due to a certain sonic boom overpressure depends upon various factors, i.e., the surface condition of the glass, the overpressure geometry and duration, the atmospheric moisture content and the composition of the glass itself. By using a data base of unpublished static test results provided by Libbey-Owens-Ford Company, a statistical analysis was performed to determine the probability of glass breakage for various overpressures.

If all flight paths are considered equally likely, that is, the aircraft could approach from any direction, then the probability of breakage for good glass at various nominal overpressures is shown below.

Overpressures	Probability of Breakage
1 psf	.000001* (*1 pane in 1,000,000 panes)
2 psf	.000023

If the aircraft were to approach from head-on perpendicular to the plane the window, the probability would increase somewhat, as shown below:

Overpressures	Probability of Breakage
1 psf	.000023
2 psf	.000075
4 psf	.001200
20 psf	.105000
40 psf	.323000

Note that for the overpressures previously discussed, around 4 psf, the probability of breakage is about one-tenth of one percent. Therefore, a few

windows can be expected to be broken or cracked as a result of the sonic booms created in the proposed airspace. The Air Force has established procedures to recover the costs of damage resulting from sonic booms. Refer to section 4.12.3 for an explanation of the Air Force claims process.

4.2.4 Sonic Boom Effects on Terrain and Seismic Activity:

Several studies have been performed to study the magnitude of seismic effects resulting from sonic booms.[27] One study by Goforth and McDonald concluded that the static deformation that occurs at the surface is unlikely to build up sufficiently to constitute a menace to structures. Although identified as a concern by the State of Utah , it is highly unlikely that the impact of sonic booms on geologic formations would be sufficient to generate landfalls or landslides.

There has been some concern that supersonic flights over mountainous areas could cause avalanches under certain conditions. In 1967, the National Park Service attributed damage to two National Park areas caused by falling earth and rock immediately after a sonic boom.[21] The only test in the United States to study the possibility of avalanche was conducted in the Star Mountain area near Leadville, Colorado.[27] No avalanche was observed as a direct result of a sonic boom. Therefore, the potential for sonic booms triggering avalanches remains largely unknown.

4.2.5 Sonic Booms Effects on Areas Beyond the Airspace Boundaries:

Sonic booms may be expected to travel beyond the area boundaries. The distance a sonic boom will travel depends on the aircraft altitude, airspeed, and atmospheric conditions such as prevailing winds. Using the decay rate equation, there would still be calculable overpressure at any lateral distance from the boom source. However, in reality these shock waves tend to refract back into the atmosphere. Since these lateral shock waves travel further than those directly beneath the plane, they move farther through the atmosphere and are refracted more. The lateral cutoff distance is that point where the shock waves start grazing the ground; at greater lateral distances, the waves refract back into the atmosphere never reaching the ground. Atmospheric conditions such as prevailing winds may shift the lateral extent of the sonic boom to greater distances than the theoretical cutoff distance.

Under average operating conditions, the shock waves will travel approximately 4.3 miles out from the flight path of the plane. At the maximum airspeed and minimum altitude allowed (M = 1.3 and 5,000 AGL), the maximum lateral cutoff distance of the sonic boom will only be about 1.4 miles from the aircraft flight track. At the same maximum airspeed but at 30,000 feet MSL, the maximum cutoff distance increases to 11 miles with overpressures substantially less than when the boom is created at 5,000 feet AGL. Under this set of conditions, the ground beneath would experience overpressures of about 1.67 psf; and the overpressure on the ground at the 11 mile distance would die down to 0.30 psf. The above, 11 mile distance, represents the widest spread of sonic waves that is expected from the proposed action.

When looking at Figure 4.0, note that all of the airspace is contiguous to

the eastern side of the proposed supersonic flight airspace and already within the restricted airspace of the UTTR. As such, the land areas below, parts of the proposed airspace, are already subjected to noise from military aircraft flying at subsonic speeds at elevations as low as 100 feet AGL. In fact, the community of Gold Hill is now close enough to existing "Southern Supersonic Flight Airspace" that it is probably exposed to occasional sonic boom overpressures created in that airspace. By the same token, the land beneath the northeastern corner of the proposed airspace is most likely already exposed to occasional sonic boom overpressures because the existing supersonic flight airspace is adjacent to it. The most populous area that could be impacted by this worst case spread of shock waves is the town of Wendover. Taking into consideration that this condition will rarely, if ever, occur and that Wendover is only on the fringe of the impacted area, there should be no adverse impacts on this community.

4.2.6 Impact on Air Quality:

The proposed supersonic flight airspace overlays portions of Elko County in Nevada and Tooele County in Utah. In the EPA review of State Air Quality Control Regions, the concentrations of particulate matter and of sulfur oxides throughout the area, with the exception of Tooele County in Utah, were listed as being "Better Than National Standards". Tooele County in Utah is listed as exceeding primary and secondary standards for sulfur oxides. However, these violations are due primarily to smelting operations on the eastern side of the County, some 90 miles east of the airspace. The concentration of oxidant (ozone) is listed as being "Better Than National Standards" in Nevada. Due to sparse population and lack of ambient air quality monitoring data, EPA considers the entire area to be "Better Than or Cannot Be Classified" in respect to attainment of the carbon monoxide and nitrogen oxide standards and also for the ozone standard in the Utah portion of the area. The airspace is not located in an Air Quality Maintenance Area.

Military aircraft conducting flight training operations within the proposed airspace will emit air pollution contaminants of particulate matter, hydrocarbons, carbon monoxide and oxides of sulfur and nitrogen. Table 1.0 provides an estimate of the projected annual pollutant emissions from the proposed air-to-air training operations within the proposed supersonic flight airspace. The quantity of each pollution was derived using data for F-16 pollutant emission rates obtained by Air Force testing and the projected annual hours of flying activity in the airspace assuming each sortie lasts 23 minutes. Sorties going into this airspace are normally scheduled for 30 minute blocks, but because of this airspace's distance from Hill AFB and the associated fuel constraints, 388 TFW pilots estimate that each sortie will last from 15 to 30 minutes (hence the 23 minute estimate). Local pilots also estimate that afterburners are used for an accumulated time of 2.5 to 3 minutes during the training sortie. Therefore, for the purpose of estimating air pollutant emissions, it will be assumed that each air-to-air sortie in this airspace will involve 20 minutes at military power

settings and 3 minutes at afterburner. It should be noted that individual afterburner bursts last only from 15 to 30 seconds in order to conserve fuel. (The most advantageous use of fuel is a part of a pilots training.)

TABLE 1.0

PROJECTED ANNUAL EMISSIONS
FROM F-16 AIR-TO-AIR SORTIES

Pollutant	Emissions (Tons/Year) Proposal
CO	56.6
HC	1.7
NOX	461.3
SOX	53.0
Particulate (Total)	7.0

These pollutants will be emitted over a large area and at an elevation normally ranging from 10,000 to 20,000 feet AGL. Without the supersonic flight airspace, this area will still have to accommodate many of the air-to-air sorties. Therefore, over half of the emissions shown in Table 1.0 would still be emitted within the airspace and possibly with more at lower elevations. The Environmental Protection Agency[35] shows the area's mean annual morning and afternoon mixing heights to be about 1000 feet and 6900 to 7900 feet AGL, respectively. The mixing height is the height above the surface through which relatively vigorous vertical mixing occurs. The mean annual wind speed averaged through the morning and afternoon mixing heights are 9 and 13 miles per hour, respectively.

All supersonic activity will take place above 5,000 feet AGL and, therefore, well above the mean annual morning mixing height. It is also estimated that 90 to 95 percent of the supersonic activity will take place above 10,000 feet AGL and will also be above the mean annual afternoon mixing height. That pollution which is emitted within the mixing height should not create a significant negative impact because the area has good dispersion characteristics. Some dispersion will also occur as a result of the turbulent wake behind the aircraft. Those pollutants emitted above the mixing height will remain aloft until the mixing height exceeds the altitude in which the pollutants were emitted. By this time the pollutants probably will have traveled a great distance (sometimes hundreds of miles) and would be greatly diluted before being returned to ground level. Considering the amount of pollutants shown in Table 1.0, it is not expected that the quantity of those pollutants returning to ground level would change ambient air quality in the area or in any other air quality control region.

4.2.7 Impact on Archeological or Historical Sites:

Seven specific archeological sites are known to exist within the Goshute Peak Wilderness Study Area (WSA). Statistical projections indicate the possible presence of about 990 open aboriginal, 60 rock shelters and 50 historic sites within the WSA.[46] Also, within the impacted area are sites associated with the old pony express and stage trail that skirted around the south end of the Great Salt Lake Desert. (Much of this desert is now DOD owned land within the UTTR.) The trail cuts north at Callao, going through Overland Canyon at the northern end of the Deep Creek Mountains. The trail then proceeds southwest to Shellbourne Pass where it splits; one trail north toward Wells, the other south toward Ely. Once past Shellbourne, the trail is out of the area of concern. As a result of some preliminary scoping, the Utah and Nevada State Historical Preservation Officers have provided written determinations that the proposed action will have no impact on archeological or historical sites.

4.2.8 Impact on Air Traffic:

Private aircraft are not prohibited from use of the Gandy Range Extension portion of the proposed supersonic flight airspace; however, the vast majority of the proposed airspace is presently restricted. This airspace is under control of the FAA at Salt Lake Air Route Traffic Control Center (ARTCC), Salt Lake City, Utah. When the area is scheduled for military activities, the control is turned over to the 299th Communications Squadron of the Utah Air National Guard. As compared to current subsonic flight operations, supersonic flight training will not result in special procedures or operating limitations being placed on private aircraft. A majority of the general aviation traffic in this area can be expected to operate below 10,000 feet AGL and most supersonic training can be expected to take place above this elevation. The Gandy Range Extension MOA is depicted on the applicable sectional aeronautical chart to warn general aviation pilots of the specific utilization of the area by military aircraft. Based on this analysis, the proposed action should have minimal effect beyond current levels on general aviation in the area.

The Aircraft Owners and Pilots Association have expressed their concern that the see-and-avoid concept of collision prevention cannot be depended upon for aircraft operating at supersonic speeds. Their concern is that a high collision potential would exist between the USAF aircraft flying at supersonic speeds and non-participating Visual Flight Rules (VFR) civilian aircraft operating below positive control airspace within the Gandy MOA. However, existing military operations in the Gandy airspace already involve speeds approaching the speed of sound and a see-and-avoid concept alone is not strictly depended upon in these instances. Also used for collision avoidance is the internal radar system of participating aircraft. The best approach to avoid conflicts is for private pilots requiring access to the airspace is to file flight plans and pay attention to the Notices to Airman put out by the FAA. Even though the floor of the proposed supersonic airspace is 5,000 feet AGL, military aircraft operating at supersonic speeds may not always be under positive radar coverage with the 299th Communications Squadron.

4.2.9 Accidents:

When compared individually with subsonic air-to-air sorties, allowing the pilots to fly short bursts at supersonic speeds should not increase the potential for an aircraft accident (crash or jettison of external stores) and any ensuing effect on human life, property or animal life. However, if approved for supersonic flight, more air-to-air sorties will be scheduled for the airspace under consideration and the increased number of sorties would increase the chance of such an accident in that area. As of 31 December 1982, the F-16 at Hill AFB had accumulated 76,617 hours of flying time since it was introduced into the Air Force inventory at Hill in January 1979. During those hours there were sixteen major mishaps or accidents involving F-16's at Hill (fourteen within the 388 TFW and two within the international training unit, no longer located at Hill AFB). None of these accidents resulted in a loss of civilian life or property, but one did involve the loss of a military life. Although the above figures indicate a low probability of an aircraft accident affecting the area, resident fear and anxiety toward aircraft accidents may result from or be intensified by sonic boom activity.

4.3 Relationship of Proposed Action to Land Use Plans, Policies and Controls:

A Notice of Intent describing the proposed action, identifying the Air Force's intention to prepare a Draft Environmental Impact Statement (DEIS), and soliciting comments was published in the Federal Register and mailed to the State and Federal agencies listed under section VI of this document. The same information was also made available through a public news release. Prior to the notice of intent, additional scoping was accomplished at the local level. At that time, representatives of Hill AFB attended a session of the State of Utah's Environmental Coordinating Committee and a session of the Utah Aeronautical Committee to present the proposal and also met with representatives of the Nevada State Clearinghouse. This section will address the land use concerns voiced in the comments received from the various agencies and discussed at the meetings attended by Air Force representatives.

4.3.1 Access to Affected Area:

4.3.1.1 Land Access:

The Gandy Range Extension portion of the proposed supersonic flight airspace is now designated as a MOA and ATCAAA while the remainder is designated as restricted airspace. These designations have nothing to do with the movement or restriction of ground vehicles below. Likewise, the authorization of the airspace above 5000 feet AGL as an airspace for supersonic flight has no impact on the movement of ground vehicles or ground access.

4.3.1.2 Access to Nonmilitary Aircraft:

Access to the airspace making up the Gandy Range MOA is of concern to private pilots traversing the area, ranchers monitoring livestock, and to State and

Federal wildlife agencies who travel through the area while performing aerial censuses of wildlife. Since the airspace is designated as a MOA and an ATCAAA, the Gandy Range appears on aviation maps to inform pilots that the airspace is a joint usage area (may be under military or FAA control). The area is designated as such on aviation maps with the objective that the potential for conflict between military and civilian aircraft be minimized. When at 15,000 feet AGL or above, all military flights in the area will be under radar surveillance by and in contact with the 299th Communications Squadron, the Utah Air National Guard unit with air traffic control responsibilities for the Range Complex. Any time the Range Complex is scheduled for military use or is "hot", air traffic control responsibilities will switch from FAA to the 299th or "Clover". During these "hot" periods Clover monitors all flights within the restricted airspace and the surrounding MOAs and ATCAAAs. The Air Force is now installing additional radar in the area of the Range to better insure radar coverage at all elevations.

When the military schedules a MOA, such as the Gandy MOA, the FAA puts out a Notice to Airman (NOTAM) that the MOA has been activated. Any commercial or private pilots flying in the area under Instrument Flight Rules (IFR) would be notified of the activation as would any pilot filing a flight plan. Although increased usage of the Gandy airspace by military aircraft (as will probably occur if approved for supersonic speeds) may make the area less attractive to civilian pilots, it will not negate the joint usage policy now existing. The majority of the proposed supersonic flight airspace outside the Gandy Range Extension is now within airspace restricted for military operations.

4.3.2 Recreation Plans:

4.3.2.1 Wilderness Areas:

The Wilderness Act of 1964 (PL 88-577) established a National Wilderness Preservation System consisting of wilderness areas to be designated on Federal lands. Wilderness as described in the Act, is to be ". . . an area . . . untrammeled by man . . . with the imprint of man's work substantially unnoticable . . . (and that) has outstanding opportunities for solitude . . ." The Act further provides that "there should be no . . . permanent road, . . . no use of motor vehicles, motorized equipment, or motor boats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."

A portion of the Deep Creek Mountain Range and the Goshute Mountain Range were identified by the Bureau of Land Management (BLM) as an inventory unit possibly having these characteristics as defined by the Wilderness Act of 1964. As such, field inventories of the area were conducted to determine the presence or absence of these qualities. As a result of this inventory, early in 1980 BLM identified a portion of the original Deep Creek Mountain and Goshute Peak inventory units as Wilderness Study Areas (refer to Figure 10.0).

Since a portion of the Deep Creek and Goshute Mountains have been identified

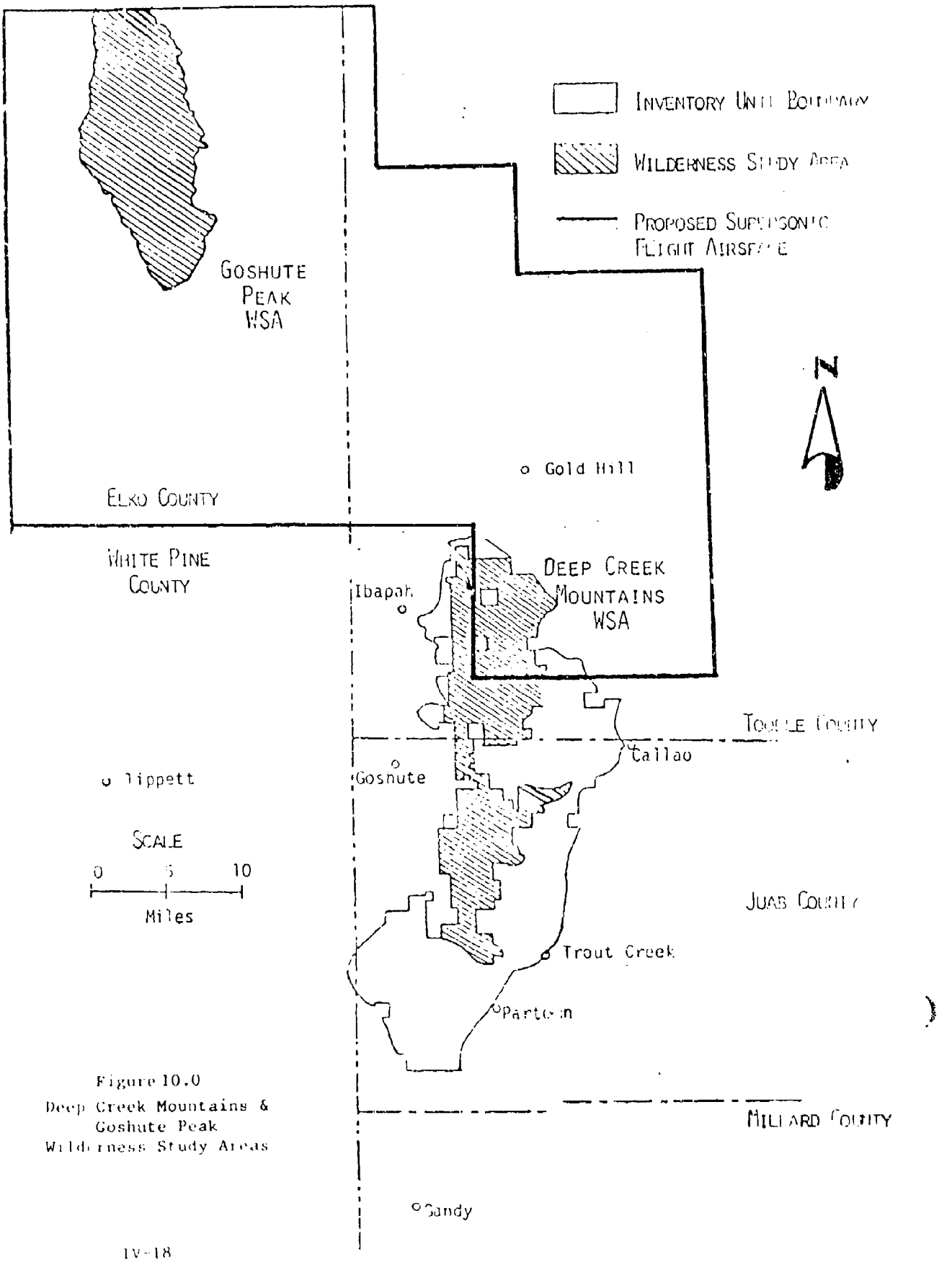


Figure 10.0
Deep Creek Mountains &
Goshute Peak
Wilderness Study Areas

as a Wilderness Study Areas (WSA), a study will be conducted as part of a comprehensive land-use planning effort by BLM. During this study phase, the public will have several opportunities to comment upon other resource values within the WSA. These comments will be considered in making land-use decisions prior to subsequent recommendations to the President and Congress on the area's suitability or nonsuitability as Wilderness. Because the areas have been identified as WSAs, it does not mean that they will be recommended as suitable for final designation as such by Congress. However, the BLM is required, under Congressional guidelines, to manage the WSAs during the study phase to preserve wilderness value until a final determination on wilderness suitability or unsuitability is made. During this time, continuation of existing mining and grazing uses will be allowed, but actions (regulatory or otherwise) will be taken to prevent unnecessary or undue degradation of the lands and their resources.

It is not anticipated that the proposed supersonic activity would involve any irreversible damage to the unique qualities of the Deep Creek Mountains or Goshute Peak. There would be no landings of aircraft in the area, no dropping of live or inert ordnance, no ground vehicles or equipment which might tend to conflict with a wilderness area.

South Pequop and Bluebell WSAs are also located near, but outside of the proposed airspace. Bluebell WSA is located contiguous to the north end of Goshute Peak WSA. It may be impacted by the lateral spread of some over-pressures, but they will be minor. South Pequop WSA is located approximately ten miles due west of the Bluebell and Goshute Peak WSAs.[44] This area should not be impacted by the proposed action.

4.3.2.2 General Recreation:

Recreational activities now taking place in the land area beneath the proposed supersonic flight airspace are of the outdoor, individual, or small group, wilderness experience nature. These activities include hunting, hiking, horse riding, camping, nature study, etc. The type of activities where the values of unspoiled nature are deliberately sought. Because of the remoteness of the area, the total number of people participating in these activities is expected to be small. Noise created by sonic booms would probably be annoying to some of the recreationists. The sonic booms will not involve any irreversible damage to the recreational capacity of the area. This annoyance is unavoidable. To the fullest extent possible, based on mission requirement, sensitive periods such as nighttime and generally weekends, would be avoided, thus further mitigating possible annoyances.

4.3.3 Wildlife Management Plans and Policies:

Wildlife agencies have expressed concern over the possible conflict between the supersonic flight proposal and plans to reintroduce wildlife into the area. BLM and the Utah Division of Wildlife Resources are considering reestablishing bighorn sheep and the peregrine falcon in the Deep Creek Mountains. BLM may also introduce about 20 antelope near the Deep Creek Mountains. Although flying operations, particularly with jet aircraft, always have the potential for bird strikes, these operations already exist

and have provided no indication of significant bird strike problems in the area. Studies referenced previously indicate that sonic booms themselves should have no adverse impact on birds or other wildlife that may be reintroduced into the area beneath the proposed supersonic flight airspace.

4.3.4 Future Development:

The State of Utah has expressed their concern that the proposed action would devalue those state lands acquired from Congress for the development or benefit of state institutions. They contend that any infringement on the potential for development by any agency would be in direct contrast with the 1894 mandate of Congress that set the lands aside. The impact of the proposed action on long-term development is discussed in the next section.

4.4 Relationship Between Local Short-Term Uses of the Environment and Maintenance and Enhancement of Long-Term Productivity:

Some of the State and Federal agencies contacted have voiced concern over the proposal based upon the potential for adverse impact the noise might have on wildlife, land values and recreational opportunities. Visitors traveling through the area are often attracted there because of its quiet, peaceful and tranquil rural atmosphere. There is concern that very concentrated sonic boom activity could adversely impact the future development of wildlife programs, recreational opportunities, and land values in the area, and result in these interests not being fully developed. In 1980, a contractor working for the Air Force finalized a study[39] on the economic impact of sonic booms on four existing supersonic flight MOAs. The four MOAs, Sells in Arizona, White Sands in New Mexico, Desert in Nevada, and Gladden in Arizona, had experienced supersonic activity since 1968, 1969, 1974, and 1977 respectively. The evidence obtained by this study allowed the contractor to make the following conclusions with respect to the impact of Air Force sonic boom activity:

(1) There was no influence exerted on population changes.

(2) There was no significant impact on employment and labor force growth in the study areas.

(3) There had been no loss of personal income, or slow down of growth which would have resulted in negative net improvements.

(4) There was no impact on the ability of retail trade to expand.

(5) There was no influential role played in assessed valuation changes within any of the seven counties of the four active supersonic flight MOAs.

(6) There was no impact on improvements in land values.

(7) The tourism industry in the study area had not been significantly impacted.

(8) There was no significant impact on the cattle ranching industry.

(9) There was no significant impact on the mining industry.

It is anticipated that the economic impact on the land area beneath the proposed supersonic flight airspace would be similar to that exhibited beneath the four study MOAs. The land areas beneath the four MOAs exhibit numerous similar characteristics to that beneath the airspace under consideration and in some instances have facets that would appear to be more sensitive to possible impacts (i.e., retirement home developments and tourism). Also, outside of the possible wildlife programs discussed earlier and the wilderness study proposed for a portion of the Deep Creek Mountains, there appears to be little indication that there are any significant plans for the future development of the land area beneath the proposed airspace.

The short-term impact of sonic booms on wildlife has been shown by several studies to be minimal. To date no studies have indicated any adverse long-term effects on wildlife.

4.5 Irreversible and Irretrievable Commitments of Resources:

There are no known irreversible or irretrievable commitments associated with the use of the proposed airspace for supersonic flight other than the jet fuel that would be consumed in ordinary operations.

4.6 Environmental Consequences -- Original Proposal:

4.6.1 Noise Impacts:

4.6.1.1 General:

The general and background information on noise and sonic booms provided under the proposed alternative is applicable to this section.

4.6.1.2 Original Proposal:

The ellipses used in the following discussion are utilized as a noise evaluation tool to better define noise levels in general areas of higher aircraft activity. Because they are not defined operating areas, the ellipses (in reality) may shift or not occur at all.

Air Force studies of the Oceana MOA on F-15 aircraft indicated that, except for entry and exit of the MOA, air-to-air combat maneuvers were concentrated in an area roughly of an elliptical shape. Since the F-15 and F-16 use similar training scenarios, portions of this data will be used to estimate the impact of F-16 operations. Because of the geographical conditions beneath this airspace and because of the location of the existing supersonic flight airspace, the airspace is capable of facilitating three training areas, modeled by ellipses, where the noise from supersonic activity will tend to be heard. The two main criteria for locating these training areas, as shown in Figure 11.0, are the geography of the underlying land and the horizontal spacing allowed between adversary aircraft. The areas are

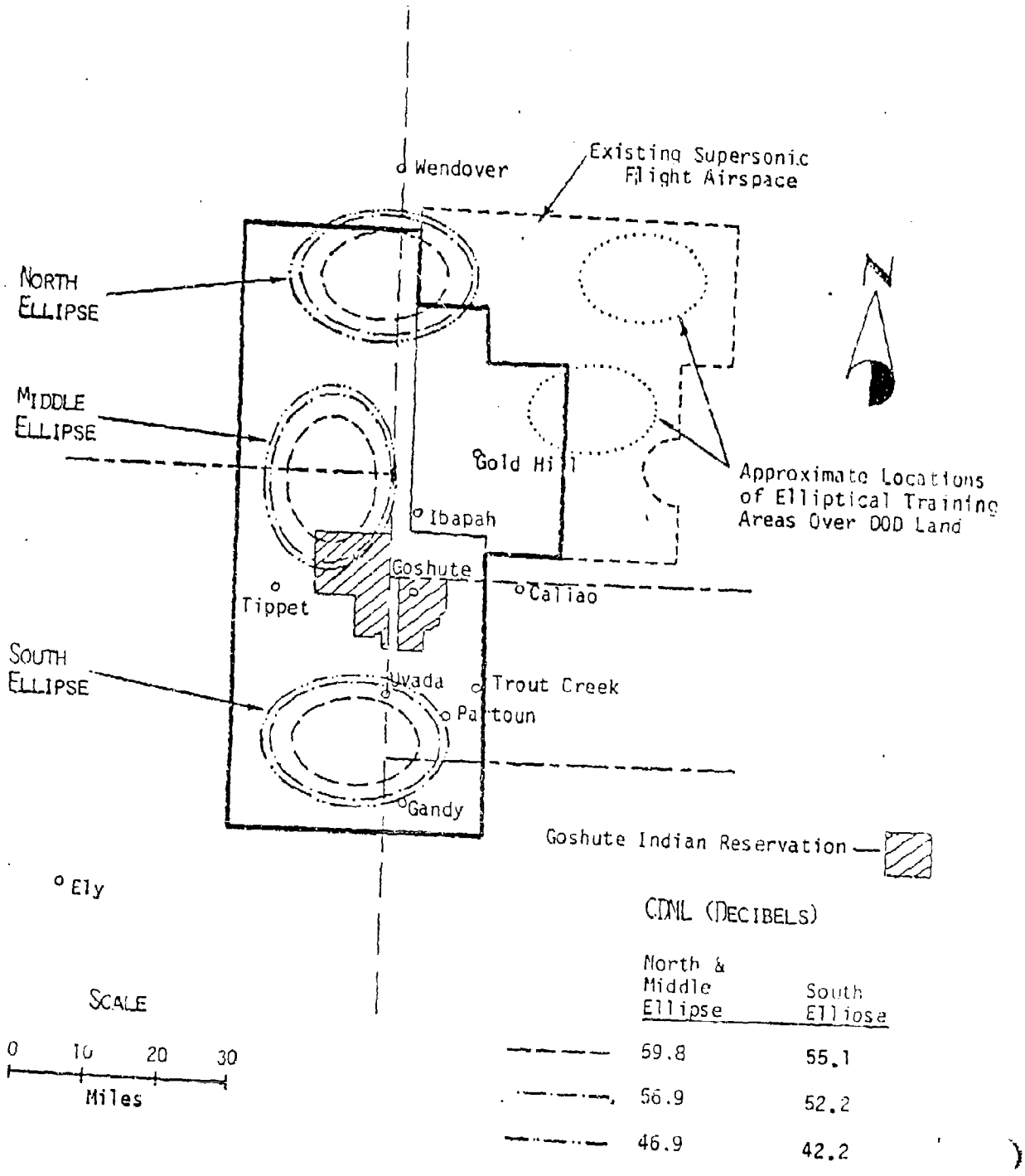


Figure 11.0
C-Weighted Day-Night Average Sound Levels (CDNL)
of Supersonic Flight Ellipses
(Original Proposal)

generally found over low-lying lands or valleys because the aircraft tend to operate at their optimum elevation region (about 20,000 feet MSL) to avoid worrying about mountain peaks or high ground reducing the safety buffer of airspace beneath them. These higher activity areas are usually found far enough from airspace boundaries and other training areas so that adversary aircraft can begin their maneuvers at a distance of at least 40 miles apart. This horizontal spacing allows for effective training in the use of the aircraft's radar. Also shown in Figure 11.0 are the approximate locations of the elliptical training areas within existing supersonic flight airspace. As can be seen, should the proposed action be approved, the north ellipse in Figure 11.0 may extend into the existing supersonic flight airspace and one of the elliptical training areas over the existing airspace appears to extend into the proposed airspace.

Under worst case conditions the airspace could accomodate 922 sorties per month that would involve supersonic flight with most of the noise levels from the activity approximated by the elliptical areas. Because they are closer to Hill AFB, the north and middle portions of the airspace would be more heavily used than the south. It is estimated that the north and middle ellipses would receive about 400 monthly supersonic sorties each and the south ellipse would receive the remaining. In Appendix B, the C-weighted day-night average sound level was calculated for the land areas and is modeled by each of the three ellipses; the north and middle ellipses would have sound levels of 59.8 decibels and the south ellipse would have a level of 55.1 decibels. These figures were based on the average supersonic speeds and altitudes anticipated for the proposed actions: Mach 1.1 and 15,000 feet AGL (20,000 feet MSL) respectively.

Utilizing an A-weighted day-night average sound level method, HUD has established that a location must have a sound level of less than 65 decibles to be considered acceptable for residential purposes. Studies[42] have shown that for comparable values of C-weighted and A-weighted noise levels, people generally find the impulse noise described by the C-weighted method to be more annoying. These same studies have shown that in the decibel range being considered in this impact statement, a penalty of about 4.5 decibels should be added to the C-weighted sound levels in order to compare them with the annoyance associated with A-weighted sound levels. Even with these penalties added, the sound levels expected from the scenario described in the previous paragraph are generally considered acceptable for residential purposes.

Under these same worst case loading conditions (922 supersonic sorties per month in the airspace), a similar analysis could be performed assuming the worst case operating conditions. For this purpose the booms are all produced at 5,000 feet AGL (lowest allowed elevation) by aircraft traveling at Mach 1.3 (highest anticipated speed). If the same number of booms reach the ground as was assumed in the previous situation, the C-weighted day-night average sound level for land areas beneath the north and middle ellipses would have a level of about 67.4 decibels and the south ellipse would have a level of about 61.7 decibels. With the 4.5 decibel penality applied to these C-weighted levels, they would be 5 to 7 decibels higher than what would normally be considered acceptable for residential purposes. But, this scenario is unrealistically exaggerated and would probably never occur.

The number of carpet booms likely to be heard at any point beneath an elliptical operating area can be estimated by the method described in Appendix C. These estimates are summarized below:

Number of Booms Heard Per Day	Probability of Hearing Given Number or More Booms Per Day	
	Northern or Central Ellipses	Southern Ellipse
1	0.86	0.50
2	0.56	0.13
3	0.27	0.02
4	0.10	0.01
5	0.03	0.01
6	0.01	
7	0.01	

As an example interpretation of these numbers, an individual living under the northern ellipse can except to hear two or more booms on slightly more than one-half of the days (from the table, 0.56), and on less than one day in one hundred would he hear seven or more booms. These probabilities drop off rapidly at distances more than 0.8 times the cut-off distance from the operating ellipse, reaching essentially zero at the cut-off distance. This outer limit where essentially no booms are expected is the same as the widest ellipse in Figure 11.0.

The situations described in the preceding paragraphs are worst case loading conditions. Under normal conditions there would only be about 719 air-to-air training sorties within the proposed airspace in one month and the flights would tend to be divided up roughly between the north and middle ellipses with few going to the southern area. In this instance, the existing supersonic flight airspace would handle the remaining air-to-air sorties. They would tend to be flown in the two areas represented by ellipses shown within the existing supersonic flight airspace area of Figure 11.0.

Under average operating conditions, the shock waves will travel only as far as the outer ellipses shown in Figure 11.0 (approximately 4.3 miles out from the innermost ellipse). At the maximum airspeed and minimum altitude allowed (M = 1.3 and 5,000 AGL), the maximum lateral cutoff distance of the sonic boom will only be about 1.4 miles from the aircraft flight track. At the

same maximum airspeed but at 30,000 feet MSL, the maximum cutoff distance increases to 11 miles with overpressures substantially less then when the boom is created at 5,000 feet AGL. Under this set of conditions, the ground beneath the inner ellipses would experience overpressures of about 1.67 psf; and the overpressure on the ground at the 11 mile distance would die down to 0.30 psf. The above, 11 mile distance, represents the widest spread of sonic waves that is expected from the proposed action. With the booms being created in the elliptical airspace discussed earlier, the 11 mile cutoff distance would create on outer ellipse as shown in Figure 11.0.

4.6.1.3 Impacts on People:

The impacts would be the same as the proposed action, except that their are approximately 300 more people located under the airspace in this alternative.

4.6.1.4 Sonic Boom Effects on Animals:

Same as for the proposed alternative.

4.6.1.5 Sonic Boom Effects on Structures:

Same as for the proposed alternative, except that their are more structures located within the area.

4.6.1.6 Sonic Boom Effects on Terrain and Seismic Activity:

Same as for the proposed alternative.

4.6.1.7 Sonic Boom Effects on Areas Beyond the Airspace Boundaries:

In addition to the same impacts associated with the proposed alternative, approximately 15 ranches, the Town of Callao, and one school may be occassionally impacted by extremely diminished overpressures.

4.6.1.8 Impact on Air Quality:

The alternative supersonic flight airspace overlays portions of Elko and White Pine Counties in Nevada and Millard, Juab and Tooele Counties in Utah. In the EPA review of state Air Quality Control Regions, the concentrations of particulate matter and of sulfur oxides throughout the area, with the exception of Tooele County in Utah, were listed as being "Better Than National Standards". Tooele County in Utah is listed as exceeding primary and secondary standards for sulfur oxides. However, these violations are due primarily to smelting operations on the eastern side of the County, some 90 miles east of the airspace. The concentration of oxidant (ozone) is listed as being "Better Than National Standards" in Nevada. Due to sparse population and lack of ambient air quality monitoring data, EPA considers the entire area to be "Better Than or Cannot Be Classified" in respect to attainment of the carbon monoxide and nitrogen oxide standards and also for the ozone standard in the Utah portion of the area. The airspace is not located in an Air Quality Maintenance Area.

The following table provides a comparison between the proposal and this alternative from the DEIS.

TABLE 2.0

PROJECTED ANNUAL EMISSIONS
FROM F-16 AIR-TO-AIR SORTIES

Emissions (Tons/Year)

Pollutant	Original Proposal	Proposed Action
CO	75.5	56.6
HC	2.3	1.7
NOX	615.0	461.3
SOX	70.6	53.0
Particulate (Total)	9.3	7.0

4.6.1.9 Impact on Archeological or Historical Sites:

Impacts are the same as for the proposed action.

4.6.1.10 Impact on Air Traffic:

The impact on air traffic is essentially the same, however, radar coverage in the southern portion of the original proposal is not as extensive.

4.6.1.11 Accidents:

Impacts are identical to the proposed action.

4.7 Relationship of the Original Proposed Action to Land Use Plans, Policies and Controls:

4.7.1 Access to the Affected Area:

4.7.1.1 Land Access:

Designation as approved for supersonic flight has no effect on movement of ground vehicles below. Same as the proposed action.

4.7.1.2 Access to Nonmilitary Aircraft:

Same as for the proposed action, although more pilots may be inconvenienced.

4.7.2 Recreation Plans:

4.7.2.1 Wilderness Areas:

Impacts are the same as for the proposed action, however, the original proposal would impact more of the Deep Creek Mountain Range WSA and the Mt. Moriah unit of the Humboldt National Forest. Located less then 10 miles south of the original proposal, it has also been identified by the U.S. Forest Service for further wilderness study. The closest actual air-to-air combat maneuvers will be concentrated in an elliptical area 14 miles from Mt. Moriah. With the aircraft speeds and altitudes anticipated, shock waves will be refracted back into the atmosphere before traveling the 14 miles to Mt. Moriah.

4.7.2.2 General Recreation:

Same as for the proposed action, except that more individuals utilizing recreational areas would be impacted.

4.7.3 Wildlife Management Plans and Policies:

Same as for the proposed action, except there is a possibility of disturbing transplanted species in the Deep Creek Mountain Range.

4.7.4 Future Development:

4.7.4.1 National Park Proposal:

The State of Nevada has informed the Air Force that the area of the Snake Mountain Range, adjacent to the south end of the original proposal, is being considered for the site of a proposed Great Basin National Park. The north tip of the Snake Range, as shown in Figure 12.0, does reach the southern boundary of the original proposal. Under normal operations, the closest air-to-air training will be accomplished some seven miles north of this boundary with sonic booms created at about 20,000 feet MSL and at a speed of Mach 1.1. Under these conditions sonic boom overpressures will be refracted back into the atmosphere almost three miles short of this boundary. At higher speeds and higher altitudes this boom overpressure will impact more ground area, but will also weaken as it travels.

The White Pine Power Project DEIS of October 1983 sites the preferred location of a generating plant in North Steptoe Valley. This site is less than 25 miles from the original proposal's operations area. If this project is funded and sited in this location, the total population in this region may increase by 50%. Although outside of the area of impact from the supersonic airspace proposal, the WPPP could generate an increased recreational demand.

4.8 Relationship Between Local Short-Term Uses of the Environment and Maintenance and Enhancement of Long-Term Productivity:

Same as for the proposed action.

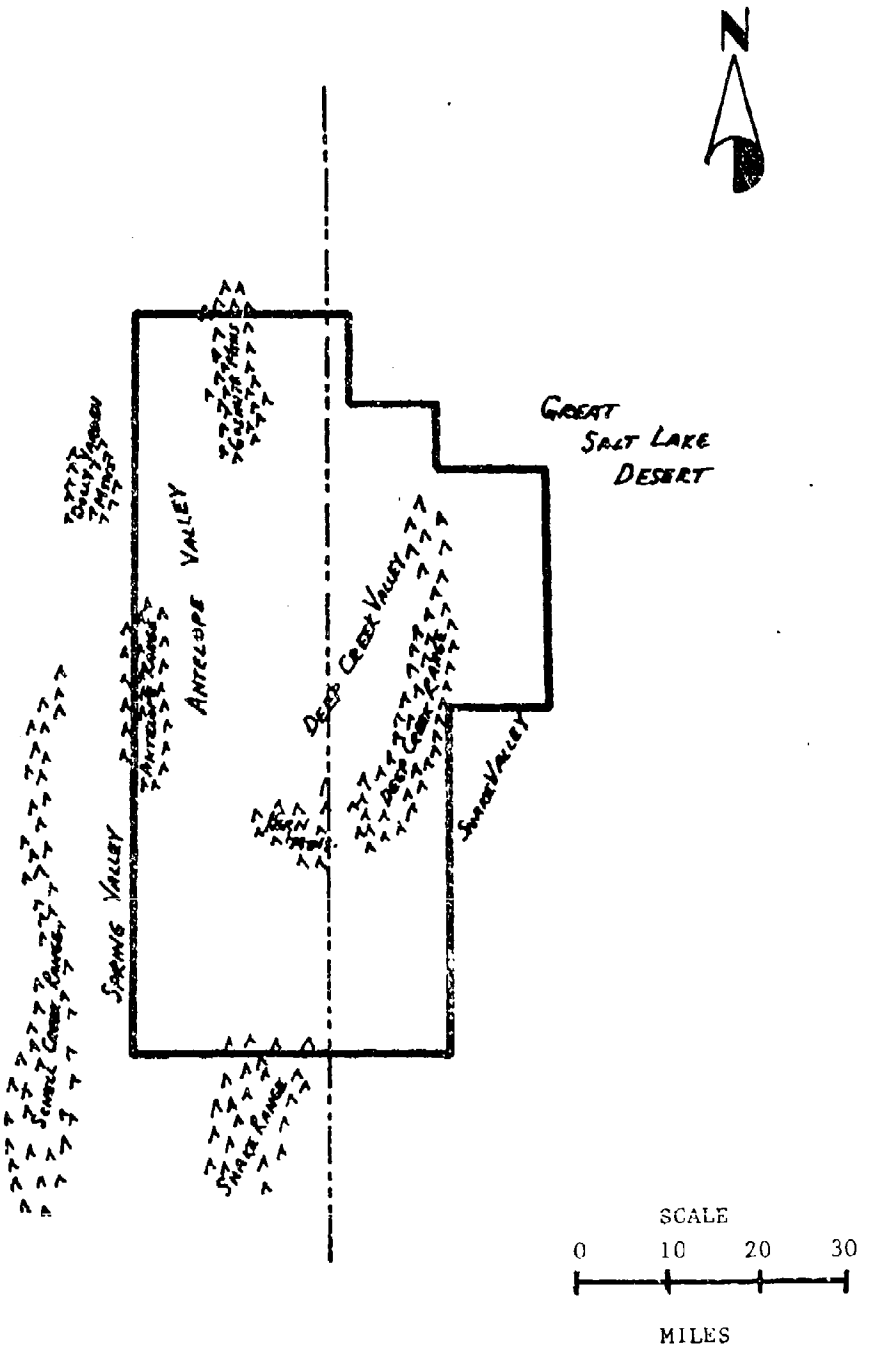


Figure 12
RANGES AND VALLEYS
IN THE VICINITY
ORIGINAL PROPOSAL

4.8.1 Irreversible and Irretrievable Commitments of Resources:

Same as for the proposed action.

4.9 No Action:

As would be expected with this alternative, all the environmental impacts associated with sonic booms as described in section 4.1, would not occur. Aircraft operations involving supersonic flight would be restricted to airspace already approved for these operations which is located over land controlled by the DOD. The proposed airspace would still be heavily used for aircraft training operations but not at supersonic speeds. The environmental impact of this alternative would amount to a "status quo", but the 388 and 419 TFW's training programs would remain significantly degraded. A significant portion of their air-to-air combat training flights would not be accomplished in airspace where the aircraft's full capability could be exploited. A true simulation of wartime situations could not be achieved on these flights and the pilot's wartime survivability could be impaired.

4.10 Alternative Airspace Within the UTTR:

The alternate training areas within the UTTR that were addressed in section 2.2.4 would experience similar environmental impacts to those expected beneath the proposed airspace and addressed in chapter IV. At any of these alternate airspaces, the air combat maneuvers would be accomplished at similar altitudes and the sonic booms generated would cause essentially the same overpressures at ground level. Available evidence indicates that domestic and wild animals are not significantly impacted by these overpressures and the analysis provided in Chapter IV indicates that the areas subjected to sonic booms are still suitable for residential living. The primary difference in environmental impact would appear to be the number of people present beneath the airspace that may be annoyed by the booms. Locating the operations in the Lucin MOAs (section 2.2.4) would impact more people than the proposed action while locating operations in R-6402, R-6405, and the Sevier MOAs (section 2.2.4) would impact similar numbers of people. The residential population beneath the Lucin MOAs is approximately 400 and the portions of R-6402, R-6405 and the Sevier MOAs in Juab and Millard Counties (Utah), the least populous portions of these areas, have a population of about 330. These latter alternative sites are individually small in useable size and unless combined may not be capable of meeting the total training requirements. Also, use of these sites would not be able to take advantage of other existing UTTR training facilities such as the HUS Arena. There is no clear cut environmental advantage (less populous areas) to the alternative sites within the UTTR and in most cases, they involve operational disadvantages.

4.11 Vertical Dimension Changes:

Any significant increase in the elevation of the proposed supersonic flight airspace would force pilots to deploy their aircraft at elevations where the maximum performance of the craft is decreased. Although this would decrease

the noise impact at ground level, it would be a direct contradiction to the primary goal of the proposed action which is to provide airspace where realistic combat training can be accomplished. Minor increases in the floor elevation (a few thousand feet) could possibly be made without affecting the normal aircraft maneuvering altitudes, but then the estimated noise impacts would remain the same because the planes would still tend to fly at the same altitude. Only the maximum anticipated sonic boom overpressure levels would be decreased and it is estimated that sonic booms will seldom be generated at these lowest altitudes.

4.12 Action Taken or Proposed to Mitigate the the Adverse Environmental Impacts:

The following actions have been taken or are proposed to minimize the impact of sonic boom activity on the environment beneath and near the proposed supersonic flight airspace.

4.12.1 Proposed Action:

The proposed action has been generated to mitigate impacts on communities in the southern portion of the airspace originally proposed in the DEIS. By reducing the size of the impacted area and limiting it to an area which is very sparsely populated, the larger population areas have been avoided.

4.12.1.1 Area Altitude Design:

To minimize noise disturbances even in remote, sparsely populated areas, the minimum altitude for supersonic flight has been proposed at 5,000 feet above ground level. This minimum altitude was selected as a compromise to allow realistic training while minimizing the impact of sonic boom activity on the area environment.

4.12.2 Minimum Weekend/Holiday Area Flying:

Use of the area for weekend/holiday supersonic flight training will be minimized. The policy for scheduling air combat training will be to first utilize that airspace already approved for supersonic flight which is located over DOD owned land. This airspace will generally be able to handle weekend/holiday supersonic flight training. This will minimize the noise impacts on the area during periods when the majority of people are participating in recreation, weekend retreat and tourism activities.

4.12.3 Damage Claims:

The Air Force will pay for damage to private property resulting from sonic booms caused by Air Force operations. Generally, the amount paid for substantiated claims is based on the repair or depreciated replacement cost, whichever is less. The Air Force will also pay for personal injury resulting indirectly from sonic booms, although occurrences of this nature

are extremely rare. The Claims Office at Hill AFB can provide required forms and information concerning claims policies and procedures. Claims and inquiries should be addressed to:

00-ALC/JA
Hill AFB, UT 84056

It is the policy of the Air Force that whenever its noncombat activities, including sonic booms, cause damage, it will make payment of fair amounts for that damage. The claimant need not prove negligence on behalf of the Air Force or any of its members in order to receive payment. The claimant need only prove the cause and effect relationship between the sonic booms and the damage.

Claimants can assist by making a record of the exact time when the damage occurred and/or a sonic boom was heard. Sonic boom damages can be repaired immediately at the claimant's expense. Actual repair costs/estimate should then be forwarded to the Hill Claims Office with required Air Force claims forms. Claims for damage may not be payable if (1) there was no Air Force activity being conducted at the time the damage occurred or (2) the damage resulted from other causes; for example, structural deficiencies.

4.13 Proposed/Recommended Actions to Mitigate Environmental Impacts:

4.13.1 Joint Study Between the Air Force and the Utah Division of Wildlife Resources:

It is recommended that the Air Force enter into an agreement with the Utah Division of Wildlife Resources (UDWR) to jointly study the effects of sonic booms on transplanted species in the Deep Creek Mountains. Such a study would yield information valuable to both the Air Force and other wildlife management agencies. The unique set of circumstances surrounding this proposed action provides an opportunity to further understand the effects of noise and sonic booms on wildlife.

4.13.2 Additional Study on Supersonic Flight within Approved Airspace:

If a waiver to perform supersonic flight within the proposed airspace is granted, it is recommended that the waiver be for a period of three years at which time the effects of the action, if any, can be reassessed. During this three year period, a study may be performed, utilizing the HUS arena and ACMI system, to locate and define the characteristics surrounding the F-16 and supersonic flight specifically for this airspace.

4.14 Considerations that Offset the Adverse Environmental Effects:

The F-16 is a lightweight single engine, multi-role tactical fighter configured for both air-to-air and air-to-ground operations. This allows it to operate from any airfield with an improved runway now being operated by the United States Air Force. The F-16 aircraft is essential for national security.

Peacetime training programs tailored directly to expected wartime threats are essential to the mission of the Air Force and thus the National Defense. Supersonic flight training in the proposed supersonic flight airspace would directly enhance the combat capability of the 388 and 419 TFWs by increasing the quantity and quality of realistic training airspace. Combat ready pilots would be able to fully explore the aircraft performance capabilities and develop, practice and refine sound combat skills and habits during supersonic flight.

4.15 Details of Unresolved Issues:

Because of the area's remoteness, residents are accustomed to the solitude and tranquility of the rural environment. Many have chosen this life style to purposely avoid the noise and pressures of urban centers. For example, in a letter to the Governor of Utah from The Parrish Ranch, the Batemans express love for their litestyle in a manner which seems to synopsize the feelings of many of the residents:

> "We live in this peaceful valley (before the jets) and love it just as it is, as the generations before us have. Some ranches and farms now have the fifth family generation being raised on them and the Goshute Reservation has longer lineage than that. We feel our lives and livelihood are at stake and do not want to have to abandon our homes and ranches."

At the time of this document's preparation, the Air Force had been contacted by the individuals and organizations identified in the public comment section of this document. Issues identified by these agencies have been addressed in the text.

The draft was filed with the Environmental Protection Agency in August 1983. Comments from public review are contained in Appendix D. Responses to these comments are contained in Appendix E.

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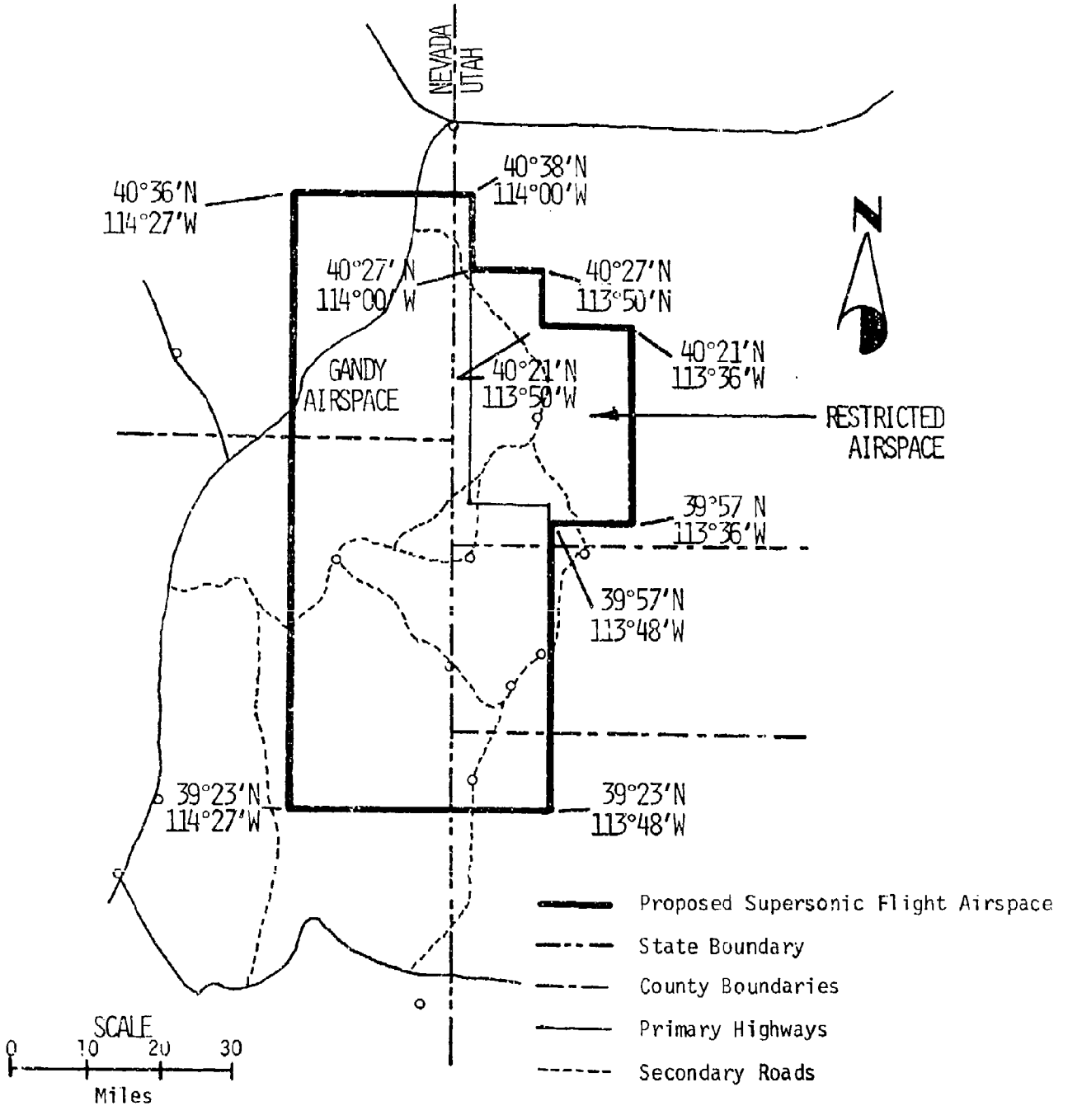


GANDY AIRSPACE

MDA - 100' AGL to but not including FL 180

ATCAAA - FL180 to and including FL 580

RESTRICTED AIRSPACE - Ground level to and including FL 580

APPENDIX B

SONIC BOOM

CHARACTERISTICS

APPENDIX B

SUPERSONIC AIRCRAFT AND SONIC BOOMS

PREFACE:

Introduction of advanced aircraft such as the F-15 and F-16, designed to operate at supersonic speeds in combat, has created a need for conducting realistic training at these speeds. One result of supersonic flight is the creation of a wave of compressed air in front of the aircraft. This is heard and felt, as a sudden loud impulse noise and is called a "sonic boom." The purpose of this appendix is to disuess causes and types of sonic booms, and their potential environmental and physiological effects.

SCOPE:

Sounds are atmospheric disturbances detected by the human ear through changes in air pressure on the ear drum. These pressure changes are extremely small and are propagated through the air at the speed of sound--about 760 miles per hour at standard sea level pressure and temperature of 59°F.

A sonic boom may be defined as an acoustic phenomenon we hear when an object exceeds the speed of sound. When the speed of an aircraft is faster than the speed of sound, the air in front of the aircraft is compressed, forming a shockwave. An individual actually hears the change in pressure when air molecules are first compressed and then returned to a more normal state. The pressure differential across the shock wave is relatively large (larger than that produced by speech pressure changes) and is very sudden. As a result the human ear perceives the rapid change in pressure as an impulsive type sound very much like the crack of a whip or a rifle shot.

With the spectacular rise in the maximum speed of military aircraft in the last three decades and the need to adequately train and maintain military pilot proficiency, sonic booms have become an increasing phenomenon in various parts of the United States. Because a sonic boom manifests itself as sound to the human ear, we tend to forget that it is actually a sudden change in pressure that may have an effect on people, structures, animals and wildlife. The most important effects are obviously those that man experiences; however, we must also be concerned with effects in other areas as well.

Since the late 1940s when aircraft first broke the so-called "sound barrier", studies and experiments have been conducted primarily to determine the effects of sonic booms on people. During the fifties and sixties as sonic booms became more prevalent in the United States, studies were expanded to include the effect on structures. Studies have also been made to determine the effects of sonic booms on domestic animals, livestock and, more recently, on wildlife. The discussion which follows will summarize the background and the latest available information for sonic booms.

BACKGROUND OF SONIC BOOM THEORY:

The movement of bodies at speeds greater than the speed of sound has been studied for well over 200 years. Forces produced by gunnery projectiles were determined at speeds up to Mach 2 (twice the speed of sound) as long ago as 1742. Ernst Mach, a professor of physics in Vienna, published papers as early as 1887 encompassing both mathematical and experimental studies of supersonic flow. Studies by Prandtl (1907), Meyer (1908) and Ackeret (1925) were precursors to the virtual explosive rate of progress in the study of supersonic flow during the thirties, forties, and fifties. From 1959 to 1964, after aircraft routinely achieved supersonic flight, a great deal of experimental work was done in wind tunnels and in flight tests to investigate the validity of the basic theories previously developed.

Sonic booms may sound the same to the human ear; however, as early as 1947 Hayes[x] derived a mathematical model subsequently called the "Supersonic Area Rule" which demonstrated that each aircraft or supersonic projectile generated its own particular pressure source which was dependent on the area cross-sections cut out by the Mach wave. Figure 1 is a simplified drawing of the pressure wave generated by a body in supersonic flight. The pressure signature is referred to as an N-wave because of the characteristic shape of the signal as recorded on electronic monitoring devices. In 1952, Whitham[x] enlarged on the cross-section idea and developed a formulation which combined the individual pressure sources making it possible to calculate the pressure field of real aircraft configurations. These calculations only considered the volume effect of the supersonic bodies as contributing to the distant disturbance field. Subsequent work by Busemann in 1955, Walkden in 1958 and Morris in 1960 considered the lift distribution created by the fuselage and wings.[x] The end result of all these later investigations was to show that at low altitude, the lift effects were relatively unimportant but for large airplanes at high altitudes the lift effects became dominant.

Other factors such as atmospheric variations also have an effect on the magnitude of sonic boom overpressure.[y] Atmospheric pressure and temperature, like the speed of sound vary with altitude. In the early development of sonic boom calculations, no detailed analytical method would account for atmospheric variations. It was assumed that flight was in a homogeneous atmosphere. Today, however, there is extensive information available to help determine atmospheric effects on sonic booms.

In 1964, H.W. Carlson of NASA and the Boeing Company developed digital computer methods and programs to calculate a realistic source distribution that could be applied to computation of the distant pressure field. The distant pressure field or far field is the pressure normally heard by an individual as the sonic boom sound or noise. The far field pressure (P) can be calcualted using a simplified formula developed by Carlson and Maglieri of NASA.[w] The simplified method is explained in detail at the end of this discussion and some representative overpressures calculated.

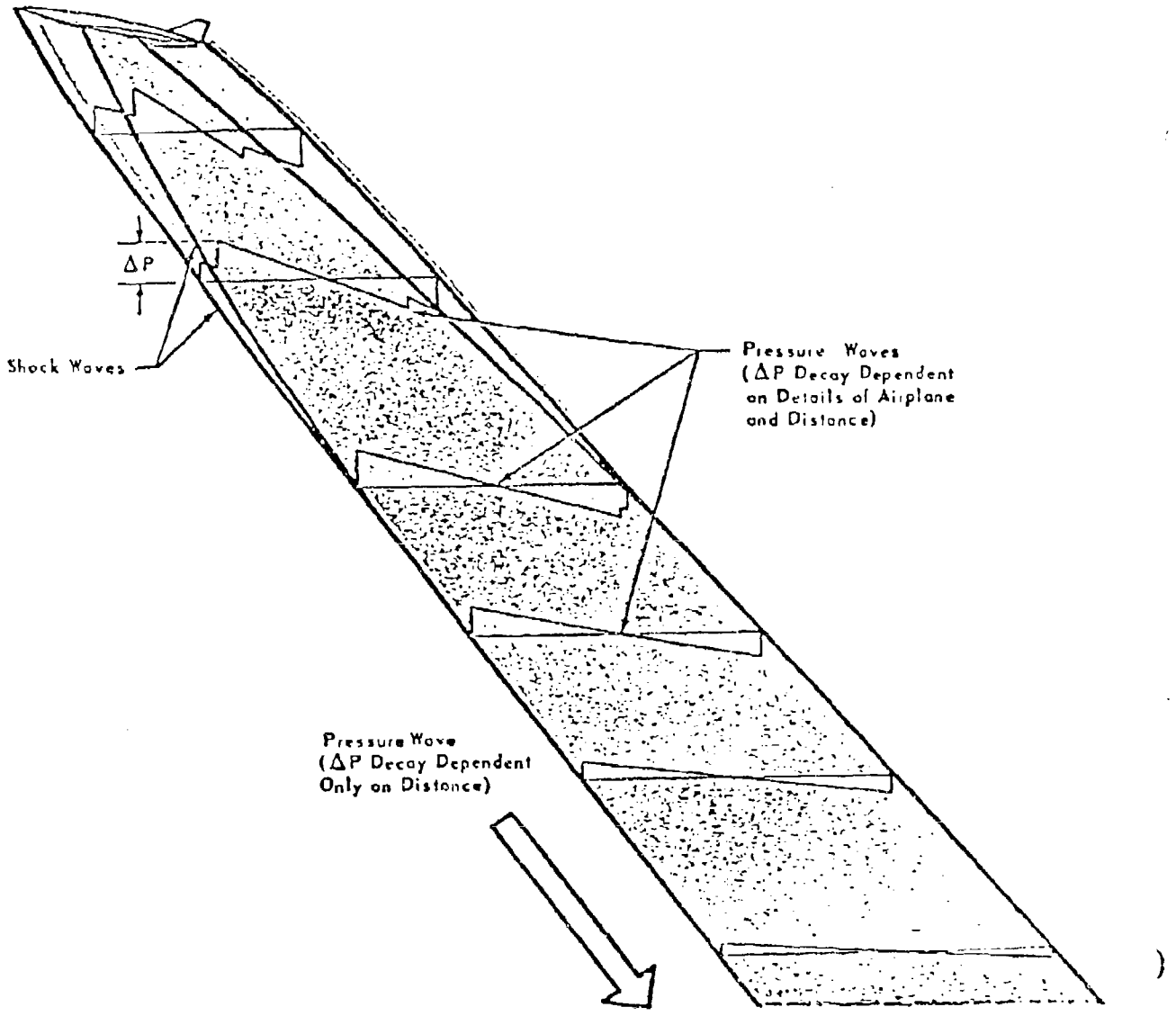


Figure 1. Simplified Sonic Boom Diagram Showing "N-Wave".

SONIC BOOM CHARACTERISTICS:

Straight and Level Flight:

A supersonic aircraft in straight and level flight produces a sonic boom pattern on the ground which can be likened to a moving carpet. The intensity of the sound and overpressure at ground level generated by the boom is largely dependent upon the altitude and airspeed of the aircraft. Peak overpressures occur directly under the centerline of the aircraft, diminishing at the edge of the carpet to approximately 0.5 to 1.0 pounds per square foot. Figure 2a is a depiction of a "carpet" type boom. Occasionally, multiple overpressures occur in the same area. These are produced by shock waves emitted from the front and rear of a single aircraft and recognized as two closely spaced booms of similar intensity.

Although a sonic boom is produced when an airplane is supersonic, not all booms will be heard on the ground. The atmospheric air temperature decreases with height above ground. This temperature gradient acts to bend the sound waves of a sonic boom upward. Depending upon the aircraft height and Mach number, the paths of many sonic booms are bent upward sufficiently that the boom never reaches ground level. The heights and Mach numbers produced during F-15 combat maneuvering are such that less than one boom out of every three produced is likely to be heard at ground level. This same phenomenon also acts to limit the width of those sonic booms that do reach ground level. The maximum lateral distance reached by the booms is normally designated as the lateral cutoff distance.

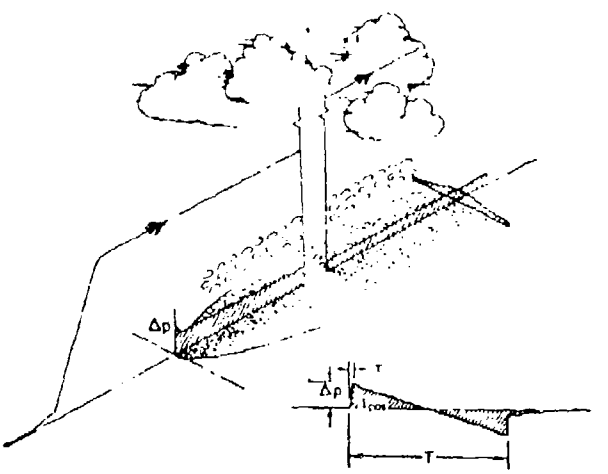


Figure 2a - Sonic boom ground-pressure patterns. - "Carpet Boom"

Maneuvering Flight:

The majority of supersonic flight for fighter type aircraft is directly associated with air combat maneuvering training. Airspace required for a normal engagement of two aircraft is usually represented as a vertical cylinder of airspace with a diameter of approximately 8-10 nautical miles. (This diameter represents the approximate maximum distance one can see another fighter aircraft with the naked eye. In practice, an elliptical rather than circular cross section is more representitive of the airspace required.) Supersonic flight is confined within this airspace. The maneuvering during an engagement is oriented toward the vertical within the airspace of the cylinder. Each engagement may last from two to four minutes and at its conclusion the aircraft reposition for the next engagement. This repositioning process may take from three to five minutes at subsonic speeds. Two to three individual engagements may take place during a single training period and involve either two or, at a maximum, four aircraft. Sonic booms generated by this training may differ considerably in area impacted and intensity from the "carpet" boom produced by a single aircraft in straight and level flight. Some of the booms may be intensified by interactions of the various pressure wave fronts generated. These are sometimes called "focus booms".

Focus Booms:

Supersonic activity that occurs during air combat maneuvering or acceleration may produce what is often referred to as an intensified or focused boom. These intensified booms can result from various airplane maneuvers which result in pressure buildups at ground level above the pressure created by the aircraft in steady rectilinear flight. In general, the total ground area receiving such sonic booms from air combat maneuvering is substantialy reduced from that impact by "carpet" booms. While the area of these "focus" booms is small (a few hundred feet wide and limited in length) when compared to the "carpet" boom, the intensity and overpressure may be higher than a "carpet" boom by a factor of two to five. Duration does not vary significantly. The "focus" boom will only affect a fixed area on the ground, i.e., the boom does not move along the surface with the aircraft as does a "carpet" boom. In each maneuver, pressure buildups occur in the localized regions suggested by the shaded areas shown in the sketches in Figure 2b. Illustrated are three types of maneuvers which could result in pressure buildups at ground level (a longitudinal acceleration, a 90^{o} turn and a pushover maneuver). The effects can be minimized by reducing acceleration rates and turn rates. The turn focus does not always reach the ground if a large radius turn is used. The pushover focus does not always reach the ground if a small curvature of the flight path is used. Pull-up maneuvers and deceleration do not produce a focus boom.

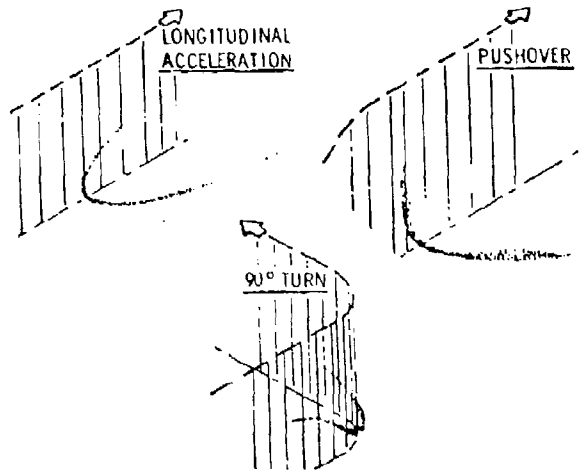


Figure 2b - Areas on the ground exposed to focused sonic booms resulting from three different airplane maneuvers.

Combined Maneuvering:

Air-to-air intercept training events, as a part of combat air maneuvering training, present the worst situation in regard to sonic booms and their possible effects on the ground environment. This training event initially employs the aircraft's radar system to acquire and engage a target aircraft and combines straight and level flight (sometimes at supersonic speeds) at medium and high altitude until visual engagement maneuvers are initiated. Traces of a number of flight paths of F-15 aircraft at the Ocean MOA show that, except for this entry and exit, maneuvers are concentrated in an area roughly of an elliptical shape. The origin of the ellipse is midway between the two navigational reference points where radar contact between the opposing aircraft began. These two points are generally about 40 miles apart and the major axis of the ellipse is along the line connecting them. For F-15 aircraft the elliptical maneuvering area is approximately 20 miles wide by 34 miles long. Within this area, supersonic flight is contained within a smaller ellipse, with the same origin and principal axes as the larger. Traces of representative flight tracks show that in the Oceana data, an aircraft can be at any location within the ellipse during a sortie. The radar portion of the intercept is complete upon simulated missile release. The engagement then often continues as a visual air combat maneuvering engagement with both aircraft still supersonic, but now within the elliptical airspace with maneuvering oriented to the vertical. Thus, the air intercept portion of combat air maneuvering training may result in a combination of the "carpet" sonic boom and additional "focus" booms in one event.

Upper Atmosphere Propagation (Secondary Boom Carpet):

Another factor that should be mentioned in sonic boom characteristics is the long range "over-the-top" sonic boom propagation in the upper atmosphere. In most instances of supersonic flight activity there are actually two patterns of exposure detected at ground level. These two patterns can be designated the primary and secondary boom carpets.[HH] The primary boom carpet is formed by the normally observed sonic boom overpressures resulting from shock wave propagation through the atmosphere below the aircraft. The center of this carpet is directly beneath the flight track and extends out laterally as far as the cutoff distance. The secondary boom carpet is generated from shock waves that are moving upwards until they reach that region of the atmosphere where temperature increases as altitude increases (the inverse condition to what normally occurs at lower elevations). In this area the shock waves are refracted back toward the ground. These upward moving shock waves can be generated in the atmosphere above the aircraft or they can be generated from the shock waves orginating below the aircraft after they have bounced off the ground (inside the primary boom carpet) or have been refracted upwards without touching the ground. The secondary carpet can be pictured as an oblong doughnut sitting around the primary carpet. Between the primary and secondary carpets there exists a region in which no sonic booms are observed.

In the region of the primary boom carpet, on or near the ground track, N-wave type signatures are typically observed with overpressures in the 1 to 5 psf range and durations of 100 to 300 milliseconds. At the fringes of the primary boom carpet, near the lateral cutoff, the signatures degenerate into weak sound waves, and they lose their N-wave characteristics. In the region of the secondary boom carpet, the disturbances tend to be very weak in intensity (0.001 to 0.01 psf) but persist over longer periods.[HH] It is the higher overpressure N-wave-type sonic booms that have caused community acceptance problems. On the other hand, the lateral cutoff booms and the secondary carpet booms tend to be more of a curiosity and are not apt to cause community response problems. The secondary carpet booms are generally not even audible, but can cause building vibrations which may be observed. Because there is generally no significant impact associated with the secondary boom carpet, it will not be discussed further.

HUMAN RESPONSE:

Of the many field studies conducted to better understand community response to sonic booms, the three most extensive were conducted over St Louis, Oklahoma City, and Edwards Air Force Base.

St Louis, Missouri[A] -- during the early 1960s, St Louis was exposed to sonic booms over a seven-month period. A total of 76 flights of supersonic aircraft were made (with several aircraft per flight), producing over-pressures up to 3 pounds per square foot (psf). After the flights, a random sampling of residents revealed the following:

- About 90% experienced some interference with speech, activities, etc.
- About 35% were annoyed.

- Less than 10% contemplated complaint action.

- A fraction of 1% actually filed a formal complaint.

- The number of formal complaints was proportional to the number of supersonic missions, i.e., as missions progressed, formal complaints increased.

- A large proportion of formal complaints mentioned building damage.

- No adverse physiological effects were noted.

Oklahoma City, Oklahoma[B] -- Slightly more than 1250 sonic booms were generated over Oklahoma City during the spring and summer of 1964. The average weekly intensity of over-pressure was increased from 1.13 psf to 1.60 psf over the period of the test. Over-pressures during the test ranged from 0 to 3.5 psf. Almost 3000 adults, representing a cross-section of local residents, were interviewed three times during the six-month test. Based on responses to various questions asked during the interviews, the group was divided into those considered "favorably disposed toward aviation" and those classified as "unfavorable" similar to those found in the St Louis test. There were exceptions, however, as indicated below:

- About 3% of the "favorable" group felt like complaining about the booms and less than 2% actually did, while 37% of the "hostile" group felt like complaining and 12% did.

- At end of the test, 73% of the total group felt they could learn to live with eight booms per day indefinitely.

- Reactions of urban and rural residents to sonic booms were essentially the same.

- Persons who filed formal complaints with the FAA were much more intensely annoyed and hostile toward the supersonic aircraft than were non-complainers. These individuals reported 3 to 4 times more sonic boom interference, four times more annoyance, 6 to 9 times more desire to complain and 3 times more damage by booms. They placed less importance on aviation in general, the necessity of supersonic travel or the necessity of local booms. Complainers were more often middle-aged females with older children and smaller families. They generally had more education and income and more often had ties with the aviation industry. About 40%, however, felt they could learn to live with eight sonic booms per day.

Edwards AFB, California[C] -- In 1967, residents from the base and two nearby communities occupied indoor and outdoor test sites and reported their physiological reactions to sonic boom over-pressures in the range of .5 to 3.0 psf. Test results were as follows:

- Those indoors reacted to an over-pressure of 1.69 psf as unacceptable in the following proportion: 50% of the residents from the two communities; 27% of the residents from the base.

- Those outdoors reacted to an over-pressure of 1.69 psf as unacceptable: 59% from the two communities; 33% from the base.

- Including all tests, outdoor listeners found booms slightly less acceptable than indoor listeners. Additionally, reaction of outdoor listeners was more consistent.

- Age and sex were not statistically significant parameters in the rating and sonic boom repetitions did not increase acceptability.

Physiological effects of sonic booms have been studied in several countries and over a variety of human conditions.

In Russia[D], tests were conducted to determine the effect on brain and heart potential, blood chemistry, arterial pressure, auditory acuity and visual response delay. Results showed that sonic boom intensities of up to 1.72 psf cause very slight shifts in these human functions. These shifts did not exceed the normal range of fluctuation and returned to normal in one to two minutes.

The University of Toronto Insitute for Aerospace Studies[E] exposed individuals to 25 sonic booms per minute for two minutes at over-pressures of 2, 4 and 8 psf. Results showed that booms of up to 8 psf had no detrimental effect on human hearing or heart rate, but that over-pressures of 4 psf would be considered unacceptable t most people. Impacts of over-pressures greater than 8 psf were not examined.

The committee on Hearing, Bioacoustics and Biomechanics of the National Academy of Science, National Research Council[F], published damage risk criteria recommending limits to peak impulsive noise levels as a function of impulse duration for a nominal exposure of 100 impulses per day. For impulse noises such as the sonic boom the limit is 140 db which equates to approximately 4.17 psf booms. This criteria is designed to protect individuals from experiencing a permanent threshold shift in hearing over a long term (20 years) period.

Tests have been conducted to determine the effect of sonic booms on sleep, task performance, loudness annoyance and startle acceptability and many other areas[V]. The Sonic Boom Literature Survey encapsulates 92 investigations in the human response to sonic booms. The following general conclusions can be drawn from these tests:

- The most frequently reported complaint in regard to sonic booms is house rattles and vibrations.

- Booms of similar intensity are slightly less acceptable to listeners outdoors.

- In all tests conducted thus far there has been no evidence of direct personal injury resulting from sonic booms.

- On the basis of experimental evidence to date, an acceptable sonic boom over-pressure compatible with undisturbed sleep cannot be given.

- Some experiments have shown a tendency for sonic boom exposure to degrade the performance of certain visual and motor tasks, while other tests have shown no effect on performance. The response is dependent upon the individual subject and the sonic boom over-pressure.

At the request of the U.S. Environmental Protection Agency, the Committee on Hearing, Bioacoustics and Biomechanics (CHABA) of the National Academy of Science has reviewed the available data on human response to sonic booms and has recommended a procedure for assessing the impact of sonic booms and other high-energy acoustical impulses on residential living.[11,33] This procedure relates percent of a population that would be expected to be highly annoyed by the sonic boom environment to the C-weighted day-night average sound level (abbreviated as CDNL) in decibels. This measure is the long term average of the C-weighted sound levels accumulated over a 24 hour period, with a 10 decibel penalty to events that occur after 10:00 p.m. and before 7:00 a.m. The C-weighting is a standardized frequency response found on sound level measuring equipment. The C-weighting puts more emphasis on the sounds of low frequencies than the A-weighting used for more common sounds such as traffic noise or subsonic airplane noise.

The CDNL for sonic boom exposures can be calculated from the expression:

$$L_{Cdn} = \overline{L_{CE}} + \log_{10} (N_d + 10\ N_n) - 49.4$$

Where $\overline{L_{CE}}$ is the logarithmic average of the C-weighted sound exposure level of individual booms, N_d is the number that occur between 7:00 a.m. and 10:00 p.m., N_n is the number that occur from 10:00 p.m. until 7:00 a.m., and 49.4 is ten times the logarithm of the number of seconds in a 24 hour day, relative to a one second reference period. An equation to calculate C-weighted sound exposure levels is given for the F-16 on Page B-26.

The relation between CDNL and the percent of a population that, on average, would be highly annoyed is:

CDNL	Percent Highly Annoyed
50	3
55	6
60	12
65	23
70	39

STRUCTURAL RESPONSE:

Following are general observations from 100 investigations of structural response to sonic booms.

- The largest percentage of sonic boom damage claims has been for glass damage. Plaster damage is second.

- The direction of boom propagation in relation to the orientation of a structure is very important.

- Sonic booms with over-pressure of 3 psf to 5 psf can cause minor damage to plaster on wood lath, old gypsum board and bathroom tile, new stucco, and suspended ceilings already damaged.

- A supersonic flight which produces 1 psf over-pressure can be expected to break 68 per million exposed glass panes. Breakage will occur almost entirely in already cracked windows. Breakage rate of new glass properly installed should be about 1 pane per million.

- Seismic effects resulting from sonic booms are well below structural damage thresholds.

Three large scale tests account for the bulk of recorded data available in describing structural response to sonic boom over-pressure. These include the Oklahoma City and Edwards AFB tests mentioned previously and a test conducted at White Sands in 1965.

Oklahoma City, Oklahoma[G] -- Eleven typical types of residential structures were instrumented and exposed to eight sonic booms per day at over-pressures of zero to 3.5 psf. The test program consisted of 26 weeks of eight daily controlled sonic booms having intensities in the range 0 - 3.5 psf (medium peak over-pressure of 1.2 psf) followed by thirteen weeks of observation and inspection of the structures to determine the normal rate of deterioration as compared to the rate of deterioration found during the 26 week sonic boom period. The major conclusions reached as a result of this investigation were as folows:

- There was no conclusive evidence of significant damage to the test houses. However, there was a significant increase in the occurrence of minor paint cracking over nail heads and in corners in two of the test houses during the sonic boom period, suggesting that sonic booms accelerated this minor deterioration.

- Measured deflection of window glass in the test houses was not sufficient to cause damage.

- Maximum free ground over-pressure alone is of little value in making structural response calculations since the shape and duration of the pressure wave acting on the structure, plus the natural frequency of the structural element must be taken into consideration.

- For a given aircraft producing N-waves of constant length, the impulse of the wave (positive area under the pressure-time plot) can be more closely correlated with some structural responses than can over-pressure. However, impulses from one aircraft should not be directly compared with impulses produced by a dissimilar aircraft for purposes of structural response.

Edwards AFB, California[H] -- Typical wood frame houses, as well as long span steel frame industrial buildings, were instrumented and subjected to over-pressures of two and three psf. Booms with durations of 0.1 second (fighter aircraft) and 0.2 second (bomber aircraft) were produced to determine wall displacement (flexing). The measured plate response of three gypsum board/wood stud/wood siding walls and one large plate glass window, and the measured racking response of two typical wood frame houses, one one-story and one two-story, were analyzed in detail and compared with the response predicted using boom signatures. The following were the most significant findings of this study:

- Sonic booms from large aircraft such as the XB-70 affect a greater range of structural elements (those elements with natural frequencies below 5 cps) than sonic booms from smaller aircraft such as the B-58 and F-104.

- Peak plate displacements of three typical walls in the two test houses were less than 0.034 inches for sonic boom over-pressure of approximately 2 psf. Racking displacements were extremely small at the roof lines of the two test houses (.005" and .0018") for sonic booms on the order of 2 psf.

- Structural response could be adequately predicted using peak over-pressures and Dynamic Amplification Factor (DAF) spectra calculated from free-field signatures.

- No sonic boom damage was observed in test structures prior to or after the test flights.

- Since the condition of the glass panes at Edwards AFB was determined prior to the test program, the number of damaged panes caused by booms from test missions should be an indicator of glass damage to be expected from supersonic flights generating peak over-pressures of 2-3 psf. The rate was one damaged pane per 7.9 million boom-pane exposures. This rate was 27 percent of the rate for buildings in communities adjacent to Edwards which were not condition surveyed prior to test missions.

- Fifty-eight percent of all incidents of damage for which complaints were received were listed as possibly caused by sonic booms generated by test program flights. Of these valid incidents, 80 percent were for glass, 5.5 percent for plaster or stucco, ad 14.5 percent for bric-a-brac or other fallen object damage.

White Sands, New Mexico[I] -- Twenty-one structures were instrumented and exposed to 1500 booms with over-pressures up to 20 psf. Insight was gained into large and small building reactions to sonic booms. No damage was detected for over-pressure up to 5 psf, nor was there any evidence of cumulative damage effects after a series of 860 successive flights producing 5 psf. One boom of about 40 psf was generated accidentally. The structural

test area included 21 buildings varying in design, construction, and age. The following are the most significant conclusions reached as a result of this study:

- The direction of boom pressure propagation in relation to the orientation of structure or structural element is very important to its reaction. For example, booms traveling directly into a window cause the window to react more violently than do booms traveling away from the window.

- The peak pressure recorded on an exterior wall surface is influenced by the wall rigidity. The stiffer the wall, the higher the pressure.

- Reflecting surfaces such as billboards or houses placed beyond 15 feet from an external house wall do no significantly modify the peak boom pressure applied to the wall. Depending on orientation of the wall and the reflecting surface with respect to the aircraft flight direction, an increase in peak pressure can be expected when the reflecting surface is closer than 15 feet from the wall.

- Motion of the frame holding a window does not significantly influence the response of large windows framed by stud walls.

- The average transmissibility of large windows (8' x 10'), defined as the ratio of peak inside to peak outside pressure, can vary between 0.5 (boom wave directed into window) and 1.0 (boom wave directed away from window).

- The transmissibility of a room appears to be governed more by the size of the window walling the room than by room volume.

- Booms cause exterior walls to move more than interior walls in the minimum damage index level for walls in small houses, such as those used in the test. Bellows distortion may govern wall damage for larger houses, but the associated minimum damage index level for the larger houses could be larger than that observed in these tests.

- To study the cumulative effects of repeated sonic booms, 680 successive flights at a scheduled over-pressure of 5.0 psf were generated during one period of the study. No damage to previously undamaged material was identified during this period.

- Bricks on the sill below a picture window in one of the test houses were cracked by the accidental sonic boom. This was apparently caused by the window flexing outward after being pushed inward by the boom over-pressure (the glass was not damaged).

The results of the three large scale sonic boom structural tests and several other tests were analyzed by NASA. In their conclusion they make the following statement:[AA]

> The extensive series of overflight tests have provided valuable data on the order of magnitude of responses to be expected. The tests

show that building structures in good repair should not be damaged at boom over-pressures less than about 11 lb/ft.[2] However, it is recognized that considerable loading variability occurs, owing to atmospheric effects, and that the residual strength of structures varies according to usage and natural causes. Thus, there is a small probability that some damage will be produced by the intensities expected to be produced by supersonic aircraft.

One additional investigation is worthy of mention. In 1977 an adobe house in southern Arizona was instrumented and evaluated while superosnic training was taking place overhead.[BB] The conclusion of the evaluation was that the adobe structure reacted similar to a conventional style structure. Based on this analysis, there should be no difference in the probability of damage to an adobe structure or a conventional structure.

EFFECTS ON TERRAIN AND SEISMIC ACTIVITY

Several studies have been performed to study the magnitude of seismic effects resulting from sonic booms.[K] One study by Goforth and McDonald concluded that the static deformation that occurs at the surface is unlikely to build up sufficiently to constitute a menace to structures. As a part of the analysis, the peak particle velocity was determined for various geological formations. The damage potential of the peak particle velocities produced by the sonic booms is well below damage thresholds accepted by the United States Bureau of Mines and other agencies. The peak particle velocities recorded at a depth of 44 feet were attenuated by a factor of 75 relative to those recorded at the surface. The maximum ground particle velocity is of the order of 0.1 millimeters per second for each psf of sonic boom over-pressure.[X]

There has been some concern that supersonic flights over mountainous areas could cause avalanches under certain conditions.[CC] In 1967, damage in two National Parks was attributed to falling earth and rock. In both incidents, the falling earth and rock were preceeded by sonic booms. The only test in the United States to study possibility of avalanches was conducted in the Star Mountain area near Leadville, Colorado.[X] Eighteen supersonic runs were studied with over-pressures ranging from 1.5 to 5.2 psf. No avalanche was observed as a direct result of a sonic boom. Forest Service personnel rated the avalanche hazard as low during the test period and considered the test as inconclusive; therefore, the potential for sonic booms triggering avalanches remains largely unknown.

STATISTICAL STUDIES OF DAMAGE

Data was gathered from the Oklahoma City and St Louis test as well as a test in Chicago to determine the number of complaints and damage claims submitted by the public.[X] Data also was used to verify damage claims and dollar value of claims paid Most claims involved broken glass and cracked plaster in more poorly constructed and maintained homes. Injury claims to people or animals were very few and of an indirect type, such as injury resulting from falling objects, broken glass or self injury due to startle.

From 1956 to 1970, the amount of money claims for structural damage was $30.6 million while the amount paid was $1.7 million. For the years up to and including 1968, 65% of all paid claims were for glass and 18% were for plaster damage.

By far, the largest percentage of sonic boom damage claims stems from broken or cracked glass damage. All of the tests conducted in the United States have confirmed that glass damage is the most prevalent damage caused by sonic booms.[3] Because the microstructure of glass is amorphous rather than crystalline, the practical design strength of glass is a surface condition property rather than a constant material property. What this indicates is that the strength of the glass is dependent on the surface scratch condition. Glass that has been sandblasted, scratched, or nicked will not exhibit the same strength as a properly installed, relatively new pane of glass.

In addition to the variation due to surface scratch condition, there are also variations with loading geometry, loading rate, atmospheric moisture content, and composition. Glass also exhibits a property known as "static fatigue" in that it is weaker for loads of longer duration. Thus for sonic boom loading, which has a duration of the order of 0.1 sec, the strength of glass will be roughly twice that obtained in typical laboratory assessments. By using a data base of unpublished static test results provided by Libbey-Owens-Ford Company, a statistical analysis was performed to determine the probability of glass breakage for various over-pressures. If all flight paths are considered equally likely; that is, the aircraft could approach from any direction, then the probability of breakage for good glass at various nominal over-pressures is shown below.[3]

Overpressures	Probability of Breakage
1 psf	.000001*
2 psf	.000023

*1 pane in 1,000,000 panes

If the aircraft were to approach from head-on or perpendicular to the plane of the window, the probability would increase somewhat, as shown below:

Overpressures	Probability of Breakage
1 psf	.000023
2 psf	.000075
4 psf	.001200
20 psf	.105000
40 psf	.323000

ANIMAL RESPONSE:

Controlled investigations of animal reponse to sonic booms began in 1965 with study of the effect of hatchability of chicken eggs. It was resumed in 1967 when the response of farm animals to sonic booms was studied as part of

the Edwards Air Force Base sonic boom experiments. Subsequent studies were concerned with the response of cattle and horses to extremely intense booms (80 to 144 psf), with effects on fish and on reindeer, mink and fish eggs.

The following are general conclusions drawn from investigations of animal response to sonic booms:

- The animal damage claims are a small fraction of total sonic boom damage claims submitted to the Air Force.

- Reactions of farm animals to sonic booms are minimal.

- Evidence indicates that exposure of mink to sonic booms does not affect reproduction.

- Sonic booms do not affect the hatchability of chicken eggs nor do they affect fish or fish eggs.

- Although knowledge concerning the effects of sonic booms on wildlife is limited, all evidence to date indicates that animals, under most circumstances, are unaffected. Sonic booms may, under extreme and unusual circumstances (booms in excess of 100 psf) adversely affect wildlife, as in the case of the Sooty Tern incident (see next page).

Individual wild, domestic or pet animals exhibit different reactions to sonic booms according to the species involved, whether the animal is alone, and some cases whether there has been previous exposure. Common reactions are moving, raising the head, stampeding, jumping and running. Avian species may run, fly or crowd. Animal reactions vary from boom to boom and are similar to low-level subsonic flights, helicopters, barking dogs, blowing paper and sudden noises. The responses are either unrecognizable or consist of an apparent alerting accompanied by trotting off a short distance. Damage claims have been submitted by farmers and livestock breeders concerning loss resulting from sonic booms. Primary complaints have been that the productivity of animals was adversely affected and that panic and injury often resulted from the startle reaction. From Air Force claims records between 1961 and 1970, $900,000 in animal claims were made and $128,000 in damages awarded. The largest amounts were connected with mink production ($610,000 in claims and $100,000 in damages paid) with claims for chickens and horses following.[L]

Several experiments have been conducted to investigate the physiological animal response to sonic booms. Studies under various tests were: Effect on hatchability of chicken eggs; cattle and horse response; effects of intense booms (80 to 144 psf) on fish; reindeer; mink; and fish eggs. In other studies no significant responses or production changes were found for pheasants, chickens, turkeys, sheep, dairy and beef cattle or horses.[M] Bell reported that between 1961 and 1970, claims submitted to the Air Force for chickens, horses, and cattle totalled $144,000 but only $21,500 was actually awarded in damages.[L]

Mink Reactions:

Two extensive investigations of mink response to sonic booms, ranging in over-pressure from 0.5 psf to 2.0 psf in one test[N] and 3.6 psf to 6.6 psf in the second test,[O] found that no adverse effect on reproduction or behavior resulted from the booms.

Chickens:

Two tests were conducted to investigate sonic boom effects on hatchability of chicken eggs. One study carried out in Texas in 1965 exposed a total of 3,415 hatching eggs to 30 booms per day over a 21 day period. Over-pressures ranged from 0.75 psf to almost 6 psf. No deviations in the hatch rate were found in this test.[Q] A second test conducted in France in 1972[Q] exposed hatching eggs to six booms per day. The hatched chicks from these eggs were all normal.

Fish:

Testing of fish eggs and guppy reaction to sonic booms was conducted in the early 1970s. Trout and salmon were reared from egg stage to maturity in the usual manner except for exposure to sonic booms in the range of 1 psf to 4 psf.[R] No abnormal increase in mortality rate was noted. Guppies were exposed to shock waves of 550 psf (in the air).[S] The fish detected the passage of the shock wave and reacted momentarily, however, no adverse effects were noted in observations during two months subsequent to the shock wave exposure.

Reindeer:

A study of reindeer reaction[T] to sonic booms revealed that at low levels of over-pressure (0.3 psf to 0.5 psf) the animals react with temporary muscle contraction and minimal or undetectable interruption of activities. Higher levels of over-pressure (up to 10.5 psf) caused the reindeer to raise their heads, look around and sniff but never produced a reaction strong enough to bring resting animals to their feet. Panic movements were not observed, but neither was adaption to startle noted.

Sooty Terns:

One well documented incident reveals that supersonic over-pressure may have affected a wild bird reproduction rate.[O] During 1969 in a Sooty Tern breeding colony of a Florida Key, the birth rate of young terns was 1.3% of the expected rate. Possible causes including weather, predation, food shortage, over-dense vegetation in the colony, pesticides, and disturbance by man were investigated and discounted. Three very intense sonic booms between May 4 and May 11 may have caused embryo damage due to egg abandonment or physical damage to uncovered eggs. (Overpressures of 100 psf or more have been generated by aircraft flying supersonically within 60 feet of the ground.) Birth rates in preceeding and succeeding years were normal.

Bighorn Sheep:

Correspondence from U.S. Fish and Wildlife Service personnel managing the Cabeza Prieta Wildlife Refuge[EE], Arizona, listed observations of bighorn reactions to sonic booms. The observations were reported as follows:

9/13/78 Plomosa Mtns, 1 ewe, 1 yrlg, 3 class II rams, 2 cl. III rams. Activity - all animals bedded down (sonic boom) animals stayed in position, standing but frozen, then entire band ran about 20 yards upslope, huddled, alert, stayed in this position for about 15 minutes then moved uphill towards new shaded area.

1/3/79. Plomosa Mtns. 6 ewes, 2 yrlgs. Activity - feeding (sonic boom) no visible reaction.

May 1979. New Water Mtns, 2 ewes, 2 lambs. Activity - bedded down (sonic boom) sheep twisted their heads and stared in several directions, none of the animals rose.

3/21/79. Kofa Mtns. 3 rams. Activity - walking up hillside (sonic boom) sheep stopped, looked around and continued walking up hillside.

3/22/79. Kofa Mtns. 13 rams. Activity - part of band bedded down, part standing around (sonic boom) bedded sheep jumped to their feet, standing sheep bolted about five yards, in about 5 minutes sheep began to feed and bed down again.

Correspondence[KK] (3 April 84) with personnel from the Department of Fisheries and Wildlife in the State of Utah, presently studying bighorn sheep in conjunction with the BLM and National Park Service, indicate the following:

1. The bighorn sheep that we have been studying seem to be more responsive to visual rather than auditory disturbance. We do not know what the response by sheep would be to jet aircraft as we have only looked at responses to fixed-wing aircraft (Cessna's to B-52's) and helicopters. When these aircraft fly over sheep, their behavior is disrupted, and they look up for the aircraft. If the aircraft passes them by, they will resume their normal behavior. On the other hand, if the aircraft stays in the vicinity of the sheep (i.e. circling), the sheep will flee or try to hide (or both).

2. If the bighorn sheep are exposed to the sound of an aircraft (especially a helicopter), their behavior is disrupted while the sound is close. When the sound is gone, they resume their behavior (i.e. feeding, etc.).

3. On several occasions high flying jet aircraft flew over bighorn sheep in our studies. These planes often created sonic booms as they flew over. In such cases the bighorn sheep looked up, but then resumed their activities soon afterward.

4. With on-the-ground explosions (i.e. dynamite), the sheep's behavior was disrupted at the time of the explosion, after which they resumed their activities.

SONIC BOOM CALCULATIONS:

A simplified method for calculating the sonic boom characteristics for various aircraft shapes has been developed as discussed earlier. The sonic boom over-pressure and signature duration may be predicted for the entire affected ground area for aircraft in level flight or in moderate climbing or descending flight paths. The procedures for calculation of the predicted sonic boom by the simplified method involves three basic steps: determination of an aircraft shape factor, evaluation of atmosphere propagation factors, and calculation of signature shock strength and duration.

The effects of flight-path curvature and aircraft acceleration are not considered in using the simplified method. The method is further restricted to a standard atmosphere without wind. These limitations, however, do not appear to affect the general applicability of this method for normal variations from the standard atmosphere and for moderate flight-path curvature and aircraft acceleration. A variety of correlations of predicted and measured sonic boom data for aircraft and spacecraft has served to demonstrate the applicability of the simplified method.

The simplified method is illustrated in Figure 3 where:

Δp = Maximum over-pressure expected

K_L = Lift parameter

P_v = Atmospheric pressure at aircraft altitude

P_g = Atmospheric pressure at the ground

K_s = Shape factor

K_p = Pressure amplification factor

M = Mach No.

W = Weight

ℓ = Length of aircraft

h = Height of aircraft above ground

Several cases were chosen for study representing the range of altitudes in which training aircraft would be conducting air combat maneuvering. Since ACM type training is the major source of sonic booms, supersonic activity involving primarily the F-4, F-15, and F-16 was selected For each aircraft, boom strengths were calculated for altitudes ranging from 15,000 to 30,000 feet mean sea level. The calculations were made for the aircraft in steady rectilinear flight (constant speed, straight and level flight). Table 1 illustrates the over-pressures of sonic booms for various altitudes. Table 2 shows the extent (width) of sonic booms at various airspeeds and altitudes and provides the intensity of the boom at cutoff.

Boom Duration:

The N-wave duration (Δt) can be estimated by the relationship:

$$\Delta t = \frac{2(\gamma+1)\, M\, r^{0.25}\, \ell^{0.75}\, K}{\gamma\, \beta^{0.75}\, a_h}\ s$$

where:

r = Slant Range (distance from observer to aircraft)

a_h = Speed of Sound at Aircraft Flight Altitude

γ = 1.4 (the ratio of specific heats)

$\beta = M^2-1$

(Other variables are as described on previous page.)

Sonic Boom Cutoff:

The temperature gradient in a standard atmosphere refracts sonic booms upwards. Booms caused by aircraft at low Mach numbers, depending on aircraft height, h, above ground, will not propagate to the ground. The Mach number below which this occurs, and above which will result in booms reaching the ground, is called cutoff mach number, and is symbolized as M_c. The cutoff Mach number is approximately given by:

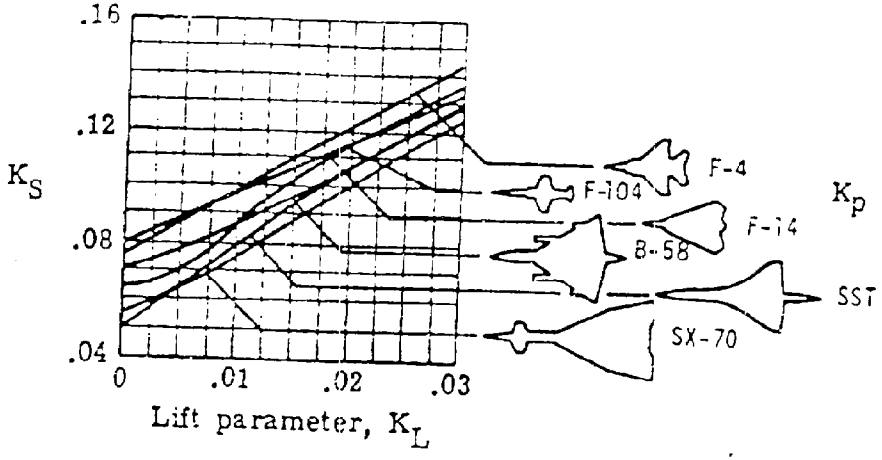
$$M_c = e^{4.033 \times 10^{-6} h} \qquad h \leq 35{,}300 \text{ feet}$$

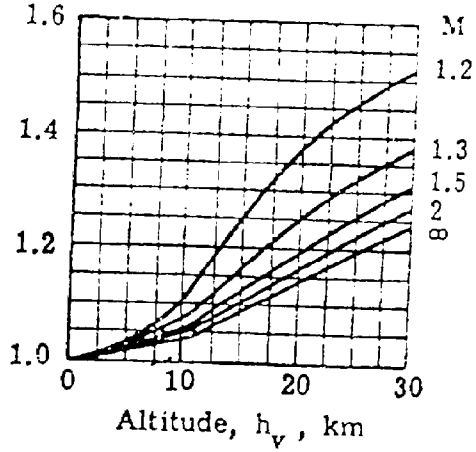
$$M_c = 1.153 \qquad 35{,}300 \leq h \leq 51{,}000 \text{ feet}$$

A similar process works to limit the distance a sonic boom will propagate to the side of a flight path, where again cutoff occurs. This distance, $d_{y,c}$, in feet, may be calculated from,[W]

$$d_{y,c} = h\, \frac{(1+M_c)}{M} \left(\frac{M^2-M_c^2}{M_c^2-1} \right)^{1/2}$$

Where h is height of the aircraft in feet, and M is the aircraft Mach number.





(1) Enter lift parameter K_L

$$K_L = \frac{\sqrt{M^2 - 1}\ W}{1.4 p_v M^2 l^2}$$

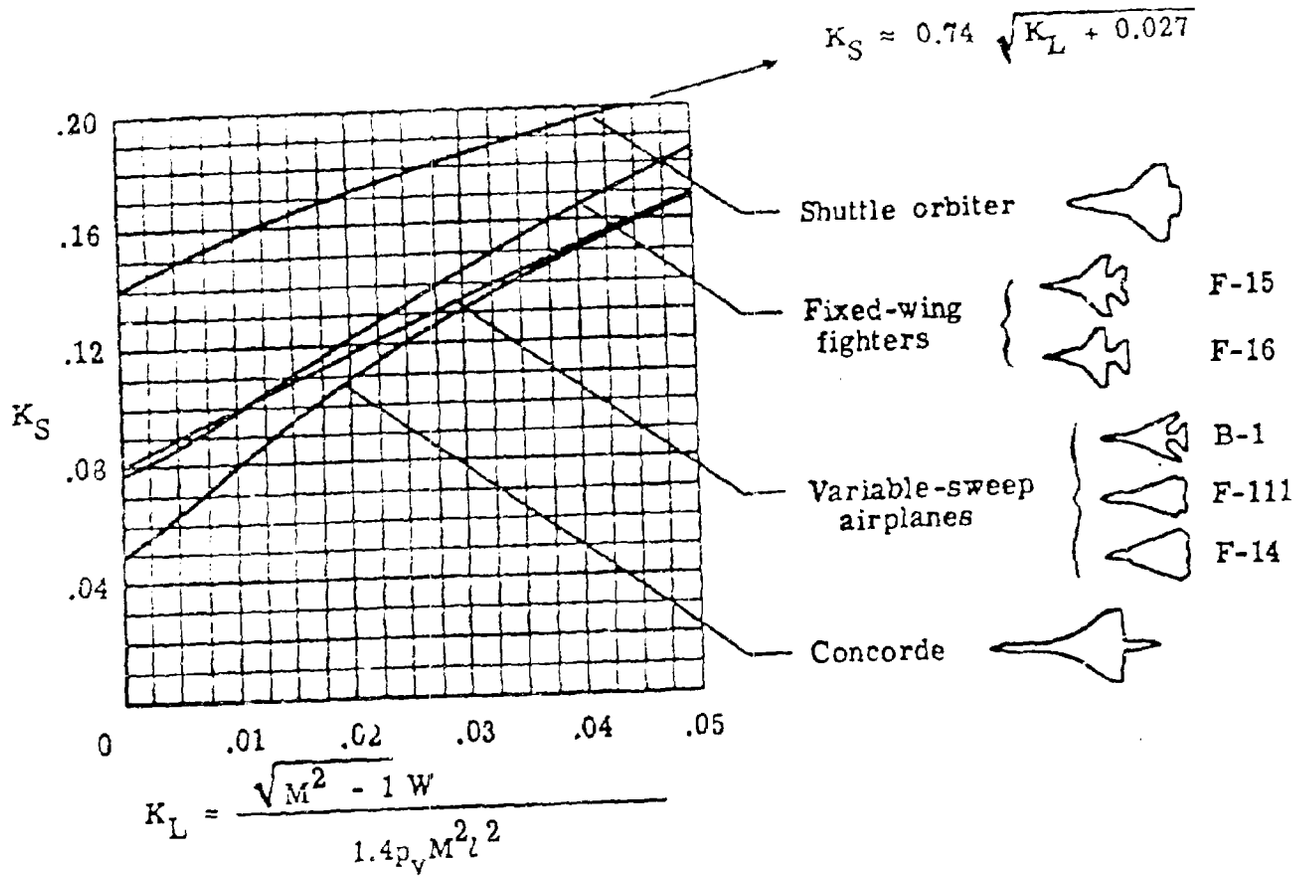
Select shape factor K_S

(2) Enter altitude h_v and Mach number M
Read pressure amplification factor K_p

(3) Calculate bow-shock overpressure

$$\Delta p_{max} = 2 K_p K_S \sqrt{p_v p_g}\ (M^2 - 1)^{1/8} h^{-3/4} l^{3/4}$$

Figure 3 - Super-simplified sonic-boom prediction method for on-track bow-shock overpressure of conventional airplanes in level flight.W



(b) Contemporary aircraft.

Figure 3 - Concluded.

TABLE I

SONIC BOOM INTENSITY* DIRECTLY UNDER FLIGHT TRACK

Aircraft	F-4				F-15				F-16			
Aircraft Altitudes (ft) MSL	15000	20000	25000	30000	15000	20000	25000	30000	10000	15000	20000	25000
Pressure at Altitude (P_y)	1194.3	972.5	785.3	628.4	1194.3	972.5	785.3	628.4	1455.3	1194.3	972.5	785.3
Aircraft Weight (W)	35,100 lb				40,000 lb				23,500 lb			
Aircraft Length (ℓ)	58.0 ft				64.0 ft				47.5 ft			
Shape Factor (K_s) M=1.1	0.080	0.082	0.084	0.086	0.080	0.081	0.083	0.085	0.079	0.080	0.081	0.083
(K_s) M=1.4**	0.082	0.084	0.087	0.090	0.082	0.084	0.086	0.088	0.080	0.081	0.083	0.085
Pressure Factor (K_p) M=1.1	1.03	1.05	1.07	1.11	1.03	1.05	1.07	1.11	1.02	1.03	1.05	1.07
(K_p) M=1.4**	1.02	1.03	1.04	1.05	1.02	1.03	1.04	1.05	1.01	1.02	1.03	1.04
Normal Ground Pressure @ 5000 ft	1760.8 PSF				1760.8 PSF				1760.8 PSF			
@ 6000 ft	1695.9 PSF				1695.9 PSF				1695.9 PSF			
ΔP (psf) @ MACH 1.1 5000 ft	3.92	2.73	2.07	1.66	4.23	2.90	2.20	1.77	6.36	3.52	2.40	1.81
6000 ft	4.17	2.82	2.11	1.68	4.49	3.00	2.24	1.79		3.78	2.53	1.89
ΔP (psf) @ MACH 1.4 5000 ft**	4.82	3.32	2.51	1.99	5.19	3.57	2.67	2.09	7.48	4.14	2.85	2.14
6000 ft	5.12	3.42	2.56	2.01	5.51	3.69	2.73	2.11		4.40	2.95	2.18

*Aircraft in steady rectilinear flight.

**F-16 Data is at M=1.3

TABLE 2

SONIC BOOM CUTOFF DISTANCE AND INTENSITY AT CUTOFF

AIRCRAFT	F-16			
Altitude (ft) MSL	10,000	20,000	15,000	25,000
Mach Number	1.1 MACH			
Ground Altitude (ft) MSL	5,000		6,000	
Cutoff Distance (ft)	18,810	22,540	22,280	18,390
COS	0.257	0.554	0.375	0.719
Slant Range in ft (r)	19,460	27,040	24,030	26,440
Shape Factor (Ks)	0.079	0.087	0.080	0.083
Pressure Factor (Kp)	1.02	1.05	1.03	1.07
p Overpressure at 0.8 Cutoff	2.68	1.72	2.08	1.58
p Overpressure at Cutoff*	0.85	0.54	0.66	0.50
Width of Audible Boom (statute miles)	7.1	8.5	8.4	7.0

* Approximate values taking into consideration the disintegration of the sonic boom wave as it travels the distance between 80 and 100 percent cutoff distance.

C-Weighted Sound Exposure Level:

The C-weighted sound exposure level, CSEL, used to calculate C-weighted day-night average sound level for sonic booms caused by F-16 aircraft is given approximately by:

$$L_{CE} = 178 + 10 \log_{10} \delta_v \delta_g + 2.5 \log_{10} (M^2 - 1) - 15 \log_{10} r$$

where:

δ_v is the ratio of atmospheric pressure of aircraft height to sea level pressure

δ_g is the ratio of atmospheric pressure at an observer's ground elevation to sea level pressure

M is the aircraft Mach number

r is the slant distance from aircraft to the observer.

As an example, the C-weighted sound exposure level for an aircraft at 20,000 feet MSL, flying at Mach 1.1, directly underneath the flight path at an observer elevation of 3,000 feet MSL is 109.2 decibels.

C-Weighted Day-Night Average Sound Level Calculations:

As identified earlier in this Appendix, the C-weighted day-night average sound level, CDNL, can be calculated from the expression:

$$L_{Cdn} = \overline{L_{CE}} + 10 \log_{10} (N_d + 10 N_n) - 49.4$$

The term $\overline{L_{CE}}$ is the logarithmic average of the C-weighted sound exposure level ($CSEL^{CE}$) of individual booms and was calculated for the purposes of this proposal using the following rationale:

The preceeding equation for the term L_{CE} yields the CSEL at a single point directly below the flight path. Points to the side of the flight path, up to a cutoff, will have decreasing sound exposure levels as the distance from the flight path increases. In addition, the extent of exposed areas along the flight path will depend on how long the aircraft remains supersonic. Along the flight path, directly underneath, the boom will travel a distance equal to the aircraft speed times the duration of supersonic flight. Air Force statistics on high performance fighters during combat maneuvers indicate 15 seconds is an average duration for supersonic speeds. The average aircraft elevation and supersonic speed anticipated for the proposed airspace is 20,000 feet MSL (15,000 feet AGL) and Mach 1.1 respectively. At Mach 1.1, the distance traveled in 15 seconds, at 20,000 feet MSL altitude, is approximately 17,100 feet and the lateral cutoff for the boom produce is about 22,540 feet.

Directly underneath the flight path the CSEL remains constant. The CSEL to the side of the flight path decreases by 15 times the logarithm of the ratio of slant distance to aircraft height above ground, up to a lateral distance equal to approximately 0.8 times the lateral cutoff. The sonic boom wave disintegrates rapidly into a rather ragged sine wave of much lower pressure as the lateral distance approaches cutoff. Following Ref. FF, CSEL is assumed to decrease by 10 additional decibels as the ratio of lateral distance to $d_{y,c}$ increases from 0.8 to 1.0. The boom CSEL is considered negligible at greater lateral distances. With aircraft height of 20,000 feet MSL (15,000 feet AGL), and a lateral cutoff distance of 22,540 feet, the CSEL at 0.8 of lateral cutoff, or 18,030 feet, is 2.9 decibels lower than directly beneath the flight path, and approximately 13 decibels lower at 22,540 feet.

The CSEL along the boom carpet, directly under the aircraft, is constant. The space average CSEL over the boom area is the energy mean average sound level from 0.8 times the lateral cutoff distance on one side of the boom width to the sound level overhead. This space average value is approximately 1.1 decibels below the overhead level for the described situation.[GG] The space average CSEL per home is thus 109.2 - 1.1 = 108.1 decibels over an area with dimensions of 17,100 feet along the flight track (3.2 miles), 18,030 feet to each side (3.4) miles), for a total area of 22 square miles.

If all booms generated in the proposed supersonic flight airspace occurred such that the same 22 square mile ground area was impacted, then the space average CSEL of 108.1 decibels could be used to calculate the day-night average sound level, CDNL, for that area. However, the booms will not be occurring at the same location. The Air Force studied air-to-air combat maneuvers in the Oceana MOA to determine the actual areas where sonic booms would be created. The aircraft used in the study were F-15s, but the analysis is being used to approximate F-16 operations for the purpose of this document.

In Ref. GG the Oceana data was analyzed and it was learned that the traces of a number of flight paths show that, except for entry and exit of the MOA, maneuvers were concentrated in an area roughly of an elliptical shape. The origin of the ellipse was at a geographical location that is midway between two navigational reference points, approximately 40 miles apart, the major axis of the elipse being along this line.

For F-15 maneuvers, the aspect ratio of the ellipse surrounding the maneuvering area was approximately 1.7:1, or 20 miles wide by 34 miles long, covering approximately 534 square miles. Within this area, supersonic flight was contained within a smaller ellipse, with the same origin and principal "axes" as the larger, having an aspect ratio of 1.5:1, with dimensions of approximately 12 miles wide by 18 miles long, enclosing an area of approximately 170 square miles.

Traces of representative flight tracks indicated that in the Oceana data an aircraft could be at any location within the ellipses during a sortie. On average, the F-15 made 0.8 booms propagating to the ground per sortie, of 15 seconds duration, during a 20 minute sortie. That is, during 0.010 of the

time the aircraft was within the supersonic maneuvering area it was, on the average, causing a propagating boom that reaches the ground. The randomness of the flight tracks within the supersonic area, and the low probability of occurrence lead to a first order assumption that the probability of a boom being experienced on the ground is a random process having a Poisson distribution function. The expected rate of boom production, and resultant CSEL are as described above; the geographical location of the aircraft when causing a boom is equally probable at any point within the supersonic maneuvering area.

The above assumptions lead to the computation that the space average CSEL per boom within the supersonic maneuvering ellipse is the space average CSEL per boom, reduced by 10 times the logarithm of the ratio of the area per boom to the area of the supersonic maneuvering area,

$$L_{CE} = CSEL - 10 \log_{10} \frac{\text{(maneuvering area)}}{\text{(boom area)}}$$

CDNL Calculations, Proposed Action:

Under the proposed action, a training area including the entire airspace was utilized because supersonic activity is predicted to occur randomly throughout the proposed airspace. This is attributed to topographic and airspace configurations. Local aircraft operations personnel have indicated that random distribution of operations within the airspace will occur. Calculations to represent normal loading conditions are as follows:

The area of the proposed airspace is approximately 1,360 square miles. Therefore, the space average CSEL becomes:

$$L_{CE} = 108.1 - 10 \log_{10} (22) = \frac{1360}{90.2} \text{ decibels}$$

With 26 booms reaching the ground per day, 5 days per week, 52 weeks per year, the long term average number of daily operations is:

$$26 \times 5/7 = 19$$

and the space average CDNL within the maneuvering area is:

$$L_{Cdn} = 90.2 + 10 \log_{10} 19 - 49.4 = 50.8$$

CDNL Calculations, Original Proposal:

In the case of the F-16 where the space average CSEL has been determined to be 108.1 decibels and the area per boom is 22 square miles.

$$L_{CE} = 108.1 - 10 \log_{10} \frac{170}{22} = 99.2 \text{ decibels}$$

Since the flights are assumed to occur anywhere within the supersonic maneuvering area, including along its periphery, a larger area outside this boundary will be exposed to somewhat lower sound levels, out to 0.8 times the cutoff distance, or 3.4 miles to the side of the flight track. This defines an outer ellipse with dimensions of 18.8 miles total width by 24.8 miles length with a long term averager CSEL of 99.2 - 2.9 = 96.3 decibels along the boundary. A third ellipse, corresponding to the cutoff boundary, has dimensions of 21.4 miles in width and 27.4 miles in length, with a boundary CSEL of 86.3 decibels. With these computations, the C-weighted day-night average sound level can be computed for the cumulative effect of operations.

In the proposed supersonic flight airspace it is anticipated that there will be three separate ellipses where supersonic maneuvering will take place. In the worst case condition (1,050 supersonic sorties being flown in this airspace in one month) it is further anticipated that the north and middle ellipses will carry about 400 supersonic sorties each with the south ellipse taking the remaining 250 supersonic sorties. Assuming each supersonic sortie produces an average of 2.5 booms and 0.3 of these actually reach ground level, the land areas beneath the north and middle ellipses will be subjected to 300 booms per month or about 14 booms per day and the land beneath the south ellipse will be subjected to 188 booms per month or about 9 booms per day.

The C-weighted day-night average sound level (CDNL) for the land areas beneath these ellipses can then be calculated using the equation identified at the beginning of this section.

North and Middle Ellipses: With 14 booms created per day, 5 days per week, 52 weeks per year, the long term average number of daily operations is:

$$14 \times 5/7 = 10$$

and the space average CDN L within the elliptical supersonic maneuvering area having dimensions of 12 by 18 miles is:

$$\overline{L_{Cdn}} = 99.2 + 10 \log_{10} 10 - 49.4 = 59.8 \text{ decibels}$$

The ellipse at 0.8 times cutoff distance, 18.8 miles wide by 24.8 miles long, has a CDNL of 59.8 - 2.9 = 56.9 decibels. The outer ellipse, defining the outer cutoff boundary, 21.4 miles wide by 27.4 miles long, has a CDNL of 46.9 decibels.

South Ellipse: With 5 booms created per day, 5 days per week, 52 weeks per year, the long term average number of daily operations is:

$$5 \times 5/7 = 3.4$$

and the space average CDNL within the elliptical supersonic maneuvering area having dimensions of 12 by 18 miles is:

$$\overline{L_{Cdn}} = 99.2 + 10 \log_{10} 3.4 - 49.4 = 55.1 \text{ decibels}$$

The ellipse at 0.8 times cutoff distance, 18.8 miles wide by 24.8 miles long, has a CDNL of 55.1 - 2.9 = 52.2 decibels. The outer ellipse, defining the outer cutoff boundary, 21.4 miles wide by 27.4 miles long, has a CDNL of 42.2 decibels.

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APPENDIX C

PROBABILITY OF SONIC BOOMS OCCURRING AT VARIOUS POINTS IN GANDY RANGE EXTENSION

APPENDIX C

PROBABILITY OF SONIC BOOMS OCCURRING
AT VARIOUS POINTS IN PROPOSED SUPERSONIC AIRSPACE EXTENSION

PROPOSED ACTION:

Probability, p, of a single boom being heard in the proposed supersonic airspace when only one boom is generated is:

$$p = \frac{\text{carpet area}}{\text{airspace area}}$$

$$p = \frac{22 \text{ sq mi.}}{1360 \text{ sq mi.}} = 0.016$$

Probability of y booms being heard when n booms are generated is:

$$P(Y) = C^n_y \, p^y \, q^{n-y}$$

y = number of booms

n = number of booms generated

p = probability of a single boom being heard when only one boom is generated in the airspace:

q = 1 - P

C^n_y = combination of n things, taken y at a time = $\frac{n!}{(y!)\,(n-y)\,!}$

This assumes that there is an equal chance that an aircraft will be located at any point in the supersonic airspace area.

The average number of carpet booms generated in a single day in the proposed supersonic airspace is:

$$n = \frac{768 \frac{\text{sorties}}{\text{month}} \times 2.5 \frac{\text{booms generated}}{\text{sortie}} \times 0.3 \frac{\text{booms to Ground}}{\text{booms generated}}}{22 \frac{\text{days}}{\text{month}}}$$

$$= 26.2 \approx 26$$

No. of Booms	Probability of hearing given no. of booms on a single day	Probability of hearing given no. or more booms on a single day
0	0.65	1.00
1	0.28	0.35
2	0.06	0.07
3	0.01	0.01
4	0.01	0.01
5	0.01	0.01
6	0.01	0.01
7	0.01	0.01
8	0.01	0.01
9	0.01	0.01
10	0.01	0.01

ORIGINAL PROPOSAL:

Probability, p, of a single boom being heard in elliptical operating area when only one boom is generated is:

$$p = \frac{\text{carpet area}}{\text{airspace area}}$$

$$p = \frac{22 \text{ sq mi.}}{170 \text{ sq mi.}} = 0.13$$

Probability of y booms being heard when n booms are generated is:

$$P(Y) = C^n_y \, p^y \, q^{n-y}$$

y = number of booms

n = number of booms generated

p = probability of a single boom being heard when only one boom is generated in the airspace

C^n_y = combination of n things, taken y at a time = $\frac{n!}{(y!)\,(n-y)\,!}$

This assumes that there is an equal chance that an aircraft will be located at any point in the elliptical operating area.

The average number of carpet booms generated in a single day in either the northern or central ellipse is:

$$n = \frac{400 \frac{\text{sorties}}{\text{month}} \times 2.5 \frac{\text{booms generated}}{\text{sortie}} \times 0.3 \frac{\text{booms to Ground}}{\text{booms generated}}}{22 \frac{\text{days}}{\text{month}}}$$

$$= 13.6 \approx 14$$

No. of Booms	Probability of hearing given no. of booms on a single day	Probability of hearing given no. or more booms on a single day
0	0.14	1.00
1	0.30	0.86
2	0.29	0.56
3	0.17	0.27
4	0.07	0.10
5	0.02	0.03
6	0.01	0.01
7	0.01	0.01
8	0.01	0.01
9	0.01	0.01
10	0.01	0.01
11	0.01	0.01
12	0.01	0.01
13	0.01	0.01
14	0.01	0.01

Above numbers apply to the northern and central ellipses.

For southern ellipse

$$\text{Expected no. of booms} = \frac{250 \times 2.5 \times 0.3}{22}$$

$$= 8.25 \quad 9 \quad \frac{\text{booms}}{\text{day}}$$

No. of Booms	Probability of hearing given no. of booms on a single day	Probability of hearing given no. or more booms on a single day
0	0.29	1.00
1	0.38	0.71
2	0.23	0.33
3	0.08	0.10
4	0.02	0.02
5	0.01	0.01
6	0.01	0.01
7	0.01	0.01
8	0.01	0.01
9	0.01	0.01

APPENDIX D
COMMENTS FROM DEIS
PUBLIC COMMENT PERIOD

APPENDIX D
COMMENTS FROM DEIS
PUBLIC COMMENT PERIOD
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54. Tooele County Commissioners (Charles Stromberg)	D-339	
55. Townsend, Mike	D-412	80, 142, 274
56. Vucanovich, Barbara, US Congresswoman - Nevada	D-361	237-240
57. Vucanovich, Barbara, US Congresswoman - Nevada	D-442	142
58. White Pine County Chamber of Commerce (Joy Bybee)	D-405	37, 142, 204
59. White Pine County Commissioners (J. K. Jones)	D-368	147, 244-247
60. Weber, Ron	D-314	31, 32, 33, 223
61. Wright, Bill	D-474	

November 21, 1983

Dear Senator Garn,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Mrs. Keana Alder
Trout Creek.
Ut
84077

November 21, 1983

RECEIVED
Nov 29 12 08 AM '83

Dear Senator Garn,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

E & Eden
Trout Creek, Utah
84077

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly** opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

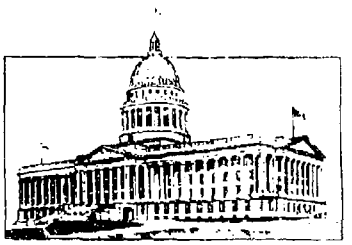
Sincerely,

Mrs Renee Akins

HOUSE OF REPRESENTATIVES
STATE OF UTAH

REP. LEE ALLEN
1ST DISTRICT
BOX 276 TREMONTON, UTAH 84337

COMMITTEES: APPROPRIATIONS (COMMUNITY AND ECONOMIC DEVELOPMENT) • HEALTH AND AGRICULTURE • STATE AND LOCAL AFFAIRS



December 16,1983

Environmental Planning
HQ AFLC/DEPV
Wright Patterson AFB, Ohio 45433

Gentlemen:

Enclosed is a copy of a letter sent to the Department of the Air Force in response to the Proposed Extension of the Supersonic Flight Training Area in the Gandy MOA.

2 I am concerned about the safety factor and the increased risk of mid air collisions with slower flying commercial aircraft on the perimeters of the MOA's, but more than that I am very concerned about the adverse effects that supersonic flights will have on the civilian population in the area. 2

Sincerely,

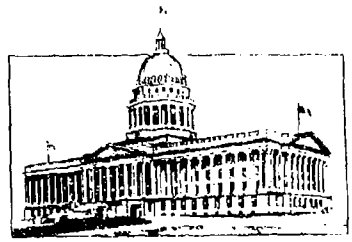
Lee Allen

Lee Allen, State Representative
District #1

HOUSE OF REPRESENTATIVES
STATE OF UTAH

REP. LEE ALLEN
1ST DISTRICT
BOX 278, TREMONTON, UTAH 84337

COMMITTEES: APPROPRIATIONS (COMMUNITY AND ECONOMIC DEVELOPMENT) · HEALTH AND AGRICULTURE · STATE AND LOCAL AFFAIRS



December 9,1983

Department of the Air Force
Attn: [illegible] Davis
7849 ABG/[illegible]XX
Hill Air Force Base, Utah

Ref: Gandy MOA

Dear Sirs:

This letter is written in response to the proposal by the Air Force to significantly expand the supersonic overflight area in the Gandy MOA.

We are very much aware of the need for continual training by the Air Force Personnel and the reasons for the desired expansion of the range in the western desert. We are also very concerned about the quality of life for the residents living in the effected areas. Also that their property rights and the security of their families are protected.

3 It seems that the residents are somewhat resigned to the fact that the Air Force activity is part of their lives, but it is clearly indicated that they are disturbed by the attitude of some of the Air Force Personnel who in their enthusiasm, or poor judgement, are flying aircraft much lower than the 5000 foot floor spoken of in your presentation. Even at sub sonic speeds these low level flights play havoc with the livestock, personal property and tranquility of that remote area. 3

It may be that your pilots will have to learn to exercise some restraint and self control, expecially over the inhabited areas.

If the quality of life for the local residents continues to deteriorate significantly because of the supersonic overflights and if the sonic blasts are much more frequent or forceful than you have indicated, it may be necessary to reappraise the situation and take whatever corrective action is required.

4 It is my feeling that I would have to definitely oppose any expansion of Air Force operations that would adversely affect the civilian population or commercial airline flights in either the range north of Highway I-80 or the Gandy range to the south. It will be with a great deal of interest that we will watch the results of the activity in this area. 4

Sincerely,

Lee Allen

Lee Allen, State Representative
District #1

/Attn

CC: Governor Scott Matheson
Senator Orin Hatch
Congressman James Hansen
Senator Karl Swan
Senator Gary G. Peterson
Representative Joe M. Moody

Partoun, Utah
Via Wendover, Ut.
Nov. 11, 1983

RECEIVED
SENATE
Nov 18 12 00 '83

Dear Sir:

I am writing to protest the establishing of the Gandy Range area for testing supersonic flights of the F-16.

We who live in Partoun, Gandy, and Uvada were never given notices of hearings held to discuss the matter. We first heard about it Nov. 3, at a PTA meeting at our school. One of the parent's mothers had seen a small article in her local paper and had sent it to her daughter who lives in Uvada (Pleasant Valley). 5

I have just finished examining a copy of the Environmental Impact Statement on the Gandy Range, Hill Air Force Base, Utah. The communities of Trout Creek, Uvada (Pleasant Valley), Partoun, and Gandy-all beneath the proposed supersonic flight airspace-were ignored in the EIS (page 29). Their comment was that there was no listing of population for Partoun, Gandy, and Uvada. Apparently, there was no effort made to check the accuracy of their sources of information. 1

There are 50 people living in Partoun, 20 people in Trout Creek, 24 people in Gandy, and about 14 people living in Uvada (Pleasant Valley). Also, the school for this entire area is located in Partoun. We have 50 students attending school here, and Partoun is located on the southern Ellipse (see fig. 8.0 of EIS).

I teach at the school here, and I am already aware of the noise and disruption caused by Hill Air Force jets making low level flights over our school. I am concerned about the health problems of our children which might result from 6

the sonic booms caused by the aircraft. The EIS expresses concern over protecting the community of Callao (pop. 19) because of historical Pony Express and Stage Routes and historical sites and also over Fish Springs area. There are 50 children at the Partoun School (West Desert School) as compared to nine at the Callao school. It would seem that our 50 children should be more important and historical sites and fish!

Before I moved to Partoun, I lived in Pleasant Valley (Uvada), and not 2 not long before I moved from there a Hill Air Force jet crashed in the mountains above us. Then another crashed just north of Callao; so we have some concern here for the safety of our own people. 2

Another concern is for the people who fly small aircraft in and out of this area. Some of the ranchers around the Gandy Range area fly in and out of here often. We already have worries about the jets flying so low through here.

In addition to the above concerns, we cannot afford the costs which will 7 result from window and structural damages caused to our homes. It is more than just the cost involved. It is also a matter of finding labor to make necessary repairs for some of us. 7

We will appreciate any help you can give us in this matter.

Respectfully yours,

Mrs. Leora Anderson

TO: ENVIRONMENTAL PLANNING, HQ AFLC/DEPV, WRIGHT-PATTERSON AFB, OH 45433 DATE 10/10/83

FROM: DENA J. AUSTIN, P.O. Box 878 Lovelock, NV. 89419 (Name, address)

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec. 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

6

Dena J. Austin
Signature
Chairman
Lovelock Tribal Council

BAGLEY RANCH

Quality Breeding, Feeding and Eating Beef

DAVID C. & REUVO C. BAGLEY
STAR ROUTE BOX 290, CALLAO
WENDOVER, UT 84083

or 2120 Pheasant Way
Salt Lake City, Utah 84121

October 10, 1983

Environmental Planning
HQ AFLC/DEEV
Wright-Patterson AFB, Ohio 45433

Dear Sirs:

4 It is very interesting to read your Request and Impact Statement on the Gandy extension to the Utah Test and Training Range Air Space. If your other figures are as erronous as Callao's population and the location of the historic Overland Stage and Pony Express Trail you have wasted hours and days on a report of little honesty and therefore your conclusions are wrong. 4

If your planes respect the new boundries as they do the present ones, no one in Western Utah or Eastern Nevada will be free from harassment. We are outside the area now and get flights almost daily over us and east and south of us.

Your pilots delight in flying just above the ground and are past before we hear the noise. Some seem to delight in buzzing us as we work in the fields to see us jump and duck.

8 We need to have areas to train in but why not do your buzzing tactics and low flying where there are no people. You have many, many square miles to the north and east where no one lives and only Dugway's test crews ever come. 8

Think twice, then act like gentlemen.

Sincerely yours,

David C. Bagley

Reuvo C. Bagley

DCB/rcb

October 13, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sirs:

As a pilot of small aircraft residing in Baker, White Pine County, Nevada, I wish to voice my opposition to the proposed Gandy Range Extension for Restricted Airspace.

9 We are surrounded by several restricted airspaces that require us to fly greater distances than necessary on many of our trips. A restricted airspace in the Gandy area would affect us in eliminating direct access into areas of Idaho.

10 Also, we are concerned with the extent of low altitude flights in our area. In Baker, there are five pilots who regularly fly at similar altitudes as some of the jets. I am particularly interested as an agricultural applicator flying at low altitudes which requires my full attention and prevents watching for other air traffic. The see-and-avoid concept is not at all practical in this circumstance. 10

Sonic booms are unpleasant annoyances to the residents of this area and have on occasion resulted in broken windows. Any increase in the frequency of sonic booms would be looked upon unfavorably.

Thank you for your consideration of my opposition.

Sincerely,

Dean Baker

Dean Baker
Baker Ranches, Inc.
P. O. Box 548
Baker, NV 89311

QUESTIONS AND COMMENTS

regarding the

DRAFT ENVIRONMENTAL IMPACT STATEMENT

ESTABLISHMENT OF THE GANDY RANGE EXTENSION

AND ADJACENT RESTRICTED AIRSPACE AS AN

AREA FOR SUPERSONIC FLIGHT TRAINING

HILL AFB, UTAH.

(comment period closing

October 14, 1983)

Submitted by:

Richard Bargen,M.D.

Box 1445,

Fallon,NV,

89406.

To: Environmental Planning,

HQ AFLC/DEPV,

Wright-Patterson AFB,

Ohio

45433.

Please include the following comments and questions in your final EIS for the proposed supersonic training areas in Elko and White Pine County, Nevada.

Please make note that rural residents of Nevada and adjacent Utah wish to have the record state that although the final EIS for the Continental Operations Range was never completed, the actions of the Air Force and Navy are producing the same result, without however addressing the environmental consequences, thus negating the process that NEPA of 1969 requires for producing a legal document.

Please make note in the final EIS that the Air Force, with this proposed action, will be producing sonic booms over the Goshute Indian Reservation. This result will pertain if the AF restricts the airspace or attempts to establish an SOA. When considered with the AF supersonic flights and attendant damage over the Papago Indians below the Sells MOA, the singling out, whether voluntary or not, of the native Americans for this type of action is repugnant to the sense of fair play and justice of all Americans.

The enclosed comments on the proposed supersonic activity in Nevada are based upon a paper of comments for the AF action proposed for Reserve, New Mexico, and Valentine, Texas. Due to the very short time interval available since the Nevada proposal truly came to public attention, I am unable to

to make all the small changes in wording, or aircraft type, that are necessary for a proper paper. None-the-less, it is very evident that the AF DEIS in all critical sections, is word-for-word identical with the RDEIS for Reserve and Valentine. The documents obviously were created by the same word processor with changes pertinent to the differing locations, but no changes in the fundamental assumptions and weaknesses.

The Nevada document is inadequate as a draft EIS. Public hearings are required. The statement of the State of Nevada that no further airspace restrictions are to be considered, is ignored.

The need for supersonic training airspace was "underestimated" (page 3). The training should be accomplished elsewhere. The airspace in Nevada is subject to an active legal action in U.S.District Court, which if successful will enjoin the Air Force from conducting supersonic flight in Nevada below 50,000 feet msl, except at Nellis.

The page references in the body of the paper refer to the Valentine and Reserve documents. The pertinent references are identical, except in page number, to the Hill AFB document.

The Hill AFB document has seriously underestimated the concern with which Nevadans view this proposal. The environmental information pertaining to Nevada is incomplete and does not address the main concern. Nevadan are also concerned at the rate at which the airspace is being segregated by restricted areas or by de facto restricted areas such as a Supersonic Operations Area becomes, regardless of the maintenance of its status as an MOA.

Due to the great similarity of the Revised Draft Environmental Impact Statements issued for proposed supersonic flight operations in Reserve and (DEIS) Gandy (NV) and Valentine Military Operating Areas, the following comments and questions are submitted for incorporation in the Final Environmental Impact Statements for both areas.

The page numbers, unless specifically noted, refer to the document entitled "Revised Draft Environmental Impact Statement....Reserve Military Operations Area, Holloman Air Force Base, New Mexico."

Due to the small amount of time available for comment on these major proposals, the following comments and questions are focused on a few critical areas of both RDEIS's.

****

SUMMARY

The fact that a Revised DEIS was prepared for the Air Force's proposal indicates compliance with #1502.9(a) of the "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act". This section states, in part...."If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." 11

It is appropriate to note that in this case the entire first 'draft' was revised. The present document, although extensively altered, suffers fatal flaws which render it unable, legally, scientifically and ethically, to form or represent the basis for a final environmental impact statement on the proposal. Hopefully, even though this comment is written hastely in the early morning hours, the data which will be presented, and the questions that will

be asked, will substantiate this conclusion..

Part 1502.17 of the Regulations referred to earlier,states, in part, ..."The environmental impact statement shall list the names, together with their qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers...Where possible the persons who are responsible for a particular analysis, including analyses in background papers, shall be identified." 12

In connection with this point we note that beginning on page 217 of the Reserve hearing, the Air Force refuses to make these names known, other than the statement by a panel member that Captain Gauntt "says he had a hand in it." Pages 218-220----"I don't know who did that." 12

On page G-95 of the Valentine RDEIS the comments about the archeological expert are noteworthy. In all, there was no information provided about the persons responsible as required by 1502.17, and probably with good reason. One panel member states that he didn't feel it was necessary for the Air Force to review all the sonic boom literature (c.f. page i--"The Air Force has conducted an intensive literature review..."). As Mark Twain noted, the idea is first to get your facts, then you distort them as you desire.

The comments above, along with the major flaws in these papers,indicate that not only are these documents inadequate to serve as a basis for an EIS, but that the Air Force should take leave of it's closet experts and delegate to an independent technical group the task of producing a paper that,as NEPA requires, must be of "high scientific quality".

It is a harsh statement to say that these documents often appear to be deceptive in intent, but careful review leaves the inquiring layperson with no other conclusion. Residents of the Morenci and Valentine areas may be

certain that their only true recourse is to claim the protection of their Constitutional Rights, and take legal action to stop the implementation of what will be a true, uncontrolled medical experiment on the effects of chronic exposure to sonic booms on human beings. (Page ii---"There is little doubt that noise including sonic booms acts as a stressor, but it is not known with any degree of certainty whether prolonged exposure results in cumulative pathology."

The Air Force conclusion of no significant impact is not legal in the sense of 'Regulation' 1508.27 which states in part....."Significantly" as used in NEPA requires consideration of both context and intensity: (a) ... Both short-term and long-term effects are relevant. (b2)...The degree to which the proposed action affects public health or saftey.(b4)The degree to which the possible effects...are likely to be highly controversial.(b5)The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks." (emphasis mine)

Clearly, the Air Force must acknowledge their proposal will result in a significant impact on human beings, by definition of the very Act that moved them to create these documents.

The Air Force needs to maintain the highest standards and efficiency in air combat training. No one questions this need. But the true costs must be tallied. This training can be performed elsewhere,as it is now, and in the type of environment where the impact on human beings will be zero.
Again, it should be stressed that there is virtually no possibility that the Air Force will account for the true human costs of these proposals. The citizens' only recourse is to the legal system, based on the Constitutional protections that are the right of everyone, even "six highly annoyed" New Mexicans. This is not a technical problem, it is an ethical and moral issue.

INTRODUCTION

There are few, if any, regions in the free world where civilian populations are legally subjected to the conduct proposed for Valentine and Reserve, by the Air Force. The Papago Indians are being overflown supersonically at this time by the Air Force. The resulting structural damage and resulting effects on human health and welfare are considerable. There is at this time no EIS available based on the DEIS for the proposed supersonic flight at SELLS. The point appears to be that even without a Final EIS actions can be taken, as proposed, with impunity. The AF has issued itself a waiver, I assume, perhaps illegally. Residents of Texas and N.M. can take comfort in Col. Smith's statement (Page G-68 Valentine RDEIS) that"...in no way, with what we propose to do here, even by the worst stretch of your imagination, as to how many booms a day you can get, will it compare to what we have been doing to the people in Sells Arizona and the environs there too, for the past several years."

The U.S.Navy has proposed supersonic air combat maneuvers over inhabited regions of Central Nevada. Their DEIS may be issued by November, 1983. One might have guessed that the Navy needs to "maintain air crew efficiency to prevent the degredation of the National Defense posture and for purposes of National Security." The AF intends to sonic boom eastern Nevada in Gandy MOA.

The Board of Commissioners of three counties in Nevada, have all passed resolutions stating their strong opposition to the Navy's proposal. The Nevada State Medical Association has declared its opposition to the proposal on the basis of concerns for the health and welfare of the civilian population. Ninety-seven percent of all the physicians practicing in rural areas of northern and central Nevada, have signed a petition requesting the

government to appoint a technical advisory committee to independently evaluate the data being used and abused to allow the Navy to reach the presumed conclusion that sonic booms produced by low altitude supersonic air combat maneuvers will not significantly impact human beings living below. This petition was instituted upon the clear presumption that much of the data and the interpretation it undergoes, will be misleading, based upon past experience here (and the analagous situation exists in Morenci and Valentine).

Perhaps Nevadans will receive a better quality document. The main Naval coordinator for the Central Nevada SOA, in San Bruno, California, when asked if the documents produced by the Air Force for Morenci and Valentine would be utilized in the Navy's document, replied in the negative. When queried as to the reason, the coordinator commented on the poor quality of the documents. However, this may be a simple case of interservice rivalry.

The largest organization of civil aviators in the world, the Aircraft Owners and Pilots Association (U.S.A.), has declared that the underlying concept of supersonic operations in a Military Operating Area, is hazardous to the safety of all aviators. In an MOA, all pilots, both civilian and military have free use of the airspace upto 18,000 feet above sea level, freely aviating without restriction or hinderance or outside control other than the F.A.R.'s which govern flight in all airspace in the U.S.A. The AF uses the term "set aside" to refer to the SOA. There is nothing set aside in the proposed SOA's, except the limitation supposedly that military aircraft can not go supersonic outside that region. The implications for civilian pilot safety are false however.

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Perhaps the only element to be set aside will be the aircraft insurance on the civilian aircraft which operate at their own risk in the SOA. One

major civil aviation insurance company contacted by phone stated that insurance written on a civil aircraft legally flying in an SOA such as proposed, would be invalidated due to the hazardous nature of the activity. The rules of flight in a MOA are "see and avoid". The supersonic activities conducted in these MOA's by the military are legally defined as ultra-hazardous and should be confined to restricted areas. Obtaining a restricted area is a rules-making procedure and the military is avoiding this approach. However, the nature of the activities here would, as AOPA states, create "de facto restricted areas obtained outside of normal legislative channels." These hazards and questions have been glossed over in the present RDEIS's.

15

15

Citizens of Texas and New Mexico complained in the hearings that their numerous petitions to the Air Force and others, went unheeded. In Nevada, numerous petitions have been compiled and forwarded to the government and the Navy, without any results. Citizens in Nevada have filed before the U.S. District Court in Nevada for relief, requesting a preliminary injunction to halt the proposed supersonic bombardment. It should be plain to residents of other rural areas that are similarly threatened, that despite all the talk and pleas, only recourse to the courts will restrain these federal agencies from taking actions that will cause irreparable harm to human health and welfare.

By attempting to create SOA's over inhabited regions of the country, the Department of Defense has undertaken a major federal action which is included in 'Regulation' 1502.4, a section dealing with "broad" federal proposals which require an EIS to address the proposed action's effects as a whole, not on a site specific basis. 1502.4c states, in part...."When preparing statements on broad actions (including proposals by more than one agency),

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agencies may find it useful to evaluate the proposal(s) in one of the following ways: 1. Geographically, including actions occurring in the same general location, such as a body of water, region, or metropolitan area. (one notes here that the siting criteria for all military federal agency SOA proposals certainly select out specific rural areas as targets).

2. Generically, including actions which have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media or subject matter...."

Presently, each SOA proposal is targeted upon a small population by a federal agency, whether Air Force or Navy. The major federal action for supersonic flight over civilian populations clearly requires a 'generic' or 'programatic' EIS, prior to allowing each federal agency to produce its own site-specific version of an EIS. A 'generic EIS' led to the cancellation of the Supersonic Transport overland flights several years ago. The federal government must, before implementing any SOA's over civilian populations, complete a satisfactory generic EIS addressing the central issue as to the hazards to the saftey, health and welfare of human beings, and the many associated issues. This issue should be dealt with in the courts if the federal government does not proceed voluntarily in compliance with the requirements of NEPA of 1969.

16 Cont.

16 Cont

As the various federal agencies are presently proceeding, each impacted region is dealt with separately. This effectively fragments and mutes any concerted actions of the relatively small groups of citizens in the different rural areas who have been selected by identical siting criteria for what was previously, quite correctly, called an uncontrolled medical experiment.

The ethics and morality of this situation demand redress. Recourse to the courts is the only real means of addressing the issue.Do it yourself.

The EIS that may result from the RDEIS's at hand, will not be reviewed by any capable persons outside of the leading agencies which produced the documents. Certainly the EPA and the CEQ (Council on Environmental Quality) will not produce a scientific critique of these documents. The EPA Region Nine (which includes Nevada) has terminated all their "noise specialists". Budget cuts have affected the reviewing process in all other regions and also other agencies with expertise in this area, such as the F.A.A.

Science, August 5, 1983, page 529...."The Council on Environmental Quality (CEQ) has fallen on sorry times since the days when its halls were thronging with experts, its reports were abundant and much-heralded, and its chairmen had the ear of Presidents...The House Appropriations Committee is particularly unhappy about CEQ. In its report it says that "not a single scientist or technical expert is on the permanent staff," which "renders the Council unqualified to offer substantive contributions or policy advice."... The CEQ is regarded as having performed an extremely valuable function in the past, issuing reports, monitoring the National Environmental Policy Act (NEPA), performing policy analysis, acting as a direct line to the President on environmental issues, and putting out an annual report that contained extensive independent analyses of environmental progress and problems. Now, as far as many observers can see, all that CEQ does is put out tardy annual reports that are little more than justifications of government policies."

In short, the only outside review these RDEIS's will receive, will be from the lay public themselves. There will not be any scientific review by qualified persons of the conclusions presented by the AF and Navy, which perhaps renders the demand for a generic EIS moot in any case.

Finally, after reviewing the first draft EIS and the subsequent revision, my personal opinion is that these documents have arisen from a long

tradition. This tradition is----proceed unless opposition is truly formidable (referring here to bureaucratic types of actions), bring out inhouse experts, and use the Mark Twain rule of EIS creation.

S. Hammon,a senior partner of the Vibration Damage Specialists in Louisville, writing several years ago in the American Bar Association Journal commented upon a document produced by the Air Force, entitled "Sonic Boom Fact Sheet".

Hammon wrote: "When the fact finding bodies are called upon to make decisions concerning sonic booms...in the near future, statutes, precedence, and customs will not exist. If guesswork is to be avoided, dependence must be placed on the opinion of learned experts. I stress Gray's qualification "learned", since there are a host of experts, but only a few who have the basic qualifications to allow them to understand this subject. The greatest offenders in this respect strangely enough, are the two agencies who fly the greatest number of jet planes--the Air Force and the Navy....All reference is to a mythical "they", who remain completely obscure. Most of the attempted answers have summations which are ludicrous due to over simplification and lack of relevancy to the arguement, which they pretend to sum up. From the beginning to the end this work is erroneous."

DATA BASE

The information upon which the RDEIS's are based is available to the layperson; articles in the scientific literature, books, etc. This is the same information on supersonic flight and its unwanted stepchild, the sonic boom, which the Air Force uses to produce these documents. The statement of the panel member noted earlier, that the AF did not review all the literature

nor was it required to, is unacceptable. Also, as noted earlier, there will not be any independent qualified scientific review of these documents. National security has been raised as an issue in each and every of the SOA proposals, including the two in Nevada. The wording,warning of severe degredation of air crew combat readiness and the subsequent effect on the national defense posture, appears to issue from the same word processor.

There are no citizens who would not make sacrifices that are actually essential for national security. However, numerous deceptions have negated the average rural citizens' instinct in these regards. The primary victim of these RDEIS's are the scientific data. To ameliorate this inbuilt bias, it was suggested earlier that independent, unbiased, technical commissions could be created to evaluate the proposals and the central concept itself. Other organizations also have reviewing abilities such as the General Accounting Office and the Congressional Research Service.

In the pages that follow, several of the fundamental assumptions or interpretations of the AF are questioned, mainly on the basis of the documents that the AF itself has used. A dispassionate review of the scientific literature and the documents produced by the AF leads to the conclusion that the present documents are inadequate as a foundation for an EIS, due mainly to the selective nature of the presentation of evidence and facts and at times to the apparently deliberate distortion of scientific data.

The time required to comment on these documents in their entirety is prohibitive. However, the points made later in this comment paper are not highly selective, that is, the errors and misrepresentations commented upon are distributed throughout the entire AF documents.

THE LOGIC OF THE RDEIS's

The strength of a structure can be no greater than the strength of its foundations. In the case of the AF documents, the final conclusion of "no significant"impact upon human beings due to low altitude supersonic overflights can be traced back through the literature, and the seminal documents and the scientific foundations can be examined. The conclusions drawn from these documents, which are then used to draw further conclusions etc., then allow us to evaluate the statements and assumptions made in final analysis.

It is instructive to compare the first DEIS with the RDEIS, simply to educate oneself as to the creative interpretation of scientific data. However, concerning ourselves with the RDEIS,the following represents the apparent logic the AF utilized in deriving their final conclusions.

1. The CSEL of individual sonic booms are calculated from expressions utilizing the peak overpressures of a sonic boom.

2. C-weighted DNL are computed from the CSEL of individual impulses.

3. C-weighted day-night levels were derived on the basis of community responses to sonic boom exposure, mainly Edwards AFB and Oklahoma City tests.

4. CDNL are accurate measures of human response to the acoustic impulses we call sonic booms.

5. The EPA, in approximately 1976, proposed the use of a C-weighted day-night level to estimate the response of other communities to large amplitude single event impulsive noises, i.e. sonic booms.

6. Carlson developed a simplified method of estimating sonic boom overpressures created by various types of aircraft and blunt bodies, a paper published in 1978. (Carlson's nomograms already appeared in 1966)

7. On the basis of 21 sorties by the F-15 at Oceana, Bolt, Beranek and

Newman, who have done numerous studies for the military, used Carlson's simplified method to estimate the sonic boom overpressures that were produced at sea level when the 21 aircraft were supersonic.

8. BBN then use a table based on a standard atmosphere which reveals that less than one third of the supersonic events produced a sonic boom which could have been detected at ground level. One flight was excluded so as not to bias the final results.

9. The long term average sound level at points on the ground was determined by the average CSEL per event, the number of events and a probability factor.

10. BBN used a "rough" approximation that these 21 flights occurred in an elliptical area and through a series of calculations arrived at the resulting sound exposure levels within two concentric ellipses which contained the aircombat maneuvers of the F-15.

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11. On the basis of the CSELs for the ellipses, the CDNL's were calculated. (based upon 15 sorties per day, 5 days weekly, 52 weeks yearly, no night time operations and less than one boom per supersonic flight).

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12. Since the number of "superbooms" could not be calculated by BBN "from the present data", they state that one of the 18 booms reported by residents of Valentine tests (June,1978) was a superboom. Thus they conclude that "With lack of any other data, in this analysis it is assumed that one boom in 20 reaching the ground will be a superboom."

13. BBN determine that superbooms will not affect the CDNL on a long term basis.

14. BBN adjust their calculations for the ground level in New Mexico and Texas and determine that maximum CDNLs to be produced in Reserve or Valentine are scarcely above 61 decibels. No corrections for changes in humidity noted.

15. The Air Force places these ellipses into portions of Valentine and Reserve MOA's and notes that these sound levels are less than those recommended maximums for normal urban residential neighborhoods and that at the most, only five or six citizens will be highly annoyed by supersonic air combat maneuvers in their county.

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In returning to the roots of the data base, the tests at Edwards AFB and the Oklahoma City tests, one is reminded of the strength of the data that is the foundation for the finding of no significant environmental impact in the RDEIS. (from Schomer's paper :"Evaluation of C-Weighted Sound for Assessment of Impulse Noise", J. Acoust. Soc. Am., Vol 62, No.2, August 1977.)

Even without consideration of studies that show truly rural areas are far more susceptible to the effects of noise, either impulsive or non-impulsive, the OC 'tests' are a very shaky foundation upon which to base conclusions noted in the RDEIS.

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Only a few points of many may be noted. Oklahoma City was chosen for these tests because it was an aviation oriented community, experienced with sonic booms. As part of the program, "control of the truth" was exercised in that a massive publicity campaign was conducted prior to the tests to inform the citizens that they would be subjected to sonic booms from overflights that were designed to determine if the SST should be developed. This program was portrayed as of great economic importance to OKC and the entire country. The residents were told that their reactions would be crucial to the development of the SST. The majority of the respondents knew that the test was of six months duration and that a favorable response would help the SST.

Despite these and many other such factors, once the tests began, numerous court actions were taken to force the cessation of the tests due to the impacts of low overpressure sonic booms. Legal actions included both private plaintiffs - [illegible]a City Council itself. At this point the numbers of complaints were very high. As the courts declined to offer relief to the plaintiffs (this was a 'test'), the numbers of complaints declined dramatically. It is upon these numbers that we obtain figures showing that overpressures, averaging about 1.2 psf, "annoyed" only a certain percentage of people.

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The results of these "controlled" sonic booms are meaningless when applied to the proposals at hand or when extrapolated to indicate the benign effect of long term exposure to high intensity sonic booms. The above is only one of many points that could be made in this connection.

The response of humans to sonic booms is reported in various studies and in the RDEIS in terms of "annoyance". "Annoyance" is a term that has no legal standing. You cannot sue anyone because they have caused you to become extremely annoyed. You cannot claim inverse condemnation of your property because an agency of the U.S.Government has caused you extreme annoyance. The term represents an amalgam of disturbing events, such as interference with sleep, interference with conversation, anxiety and fear engendered by noise or perceived danger, etc. The point is that when an RDEIS claims certain levels of annoyance will occur, no legal or even meaningful statement has been made.

It is noted that all the figures relating to overpressures that "will" occur in these SOA's, are calculated. No measurements were made at Oceana, no measurements were made during the "Valentine Tests", etc. Results are based on 21 sorties from which, on the basis of nomograms, calculations, estimations

and approximations (from aircraft in level flight in standard conditions). Perhaps most indicative of the presumptive nature of the data is the

17 statement by Bolt, Beranek and Newman that "Determining the probability of a superboom occurring, per aircraft sortie, is not readily possible from existing data...With lack of any other data, in this analysis it is assumed that one boom in 20 reaching the ground will be a superboom." 17

The French "Jericho" tests are noted several times in the RDEIS and the bibliography. These researchers went to great lengths to obtain actual measurements of sonic boom overpressures and locations of sonic booms made by fighter aircraft engaged in standard aircombat maneuvers. These researchers, whose evidence was available to BBN and the AF, state: "All aircraft produce

19 at least one focus boom when they start supersonic flight (focus due to acceleration). Military aircraft which make high load factor maneuvers produce focus and superfocus booms all along the supersonic airpath." 19

Again, simply one point amongst the hundred that indicate how unreliable the RDEIS is. It would be appropriate to note here again, that in the RDEIS as in the first draft, the terminology relating to superfocused booms is used incorrectly.

The simplified method used by the AF to obtain SOA's should be patented. For the first time in this land one is able to lose Constitutionally granted rights (the freedoms that we are protecting, presumably) on the basis of calculations performed by a simple, handheld calculator.

20 An internationally recognized expert on sonic booms, one who is noted in the RDEIS, told me that the CDNL levels recommended by the EPA and HUD are certainly too high, even presuming that they in some manner measure the true response of human beings to sonic booms. 20

In sum, if time allowed, the RDEIS and its substructure could be shown,

item by item, to be inadequate, both as a document that pretends to scientific accuracy and as a legal document from the point of view of NEPA of 1969.

If, as the Air Force states, the sonic boom impacts in Reserve and Valentine would be far below EPA and HUD sanctioned levels for an urban, residential neighborhood, then fly the aircombat maneuvers over the cities. The noise levels, the AF states, could be doubled and still fall within these guidelines. If the environmental impact of the sonic booms is so minimal, then why did the suggestion of residents of New Mexico, to fly all missions over Valentine, cause Air Force Col. Jeff Smith to say "For those who say take it all to Valentine, I find that unconscionable personally." (page 193 of the Reserve RDEIS). If the levels of both areas are so low that even doubling the number of sorties in one area would not cause the HUD criteria to be exceeded, then why does the Air Force indicate that an ethical problem would be involved with this shift? 21

Finally, as many persons at the hearings asked, why was the question of flying supersonic over inhabited rural areas not raised earlier? After all, and contrary to the impression given in the hearings, these aircraft (F-15 and F-16) became operational several years ago and their supersonic flights at Mach 1.1 have been attained routinely by military fighters for two decades. It should be noted that the F-15 went to Holloman AFB on the basis of the positive finding noted in "Environmental Determination for the Proposed Beddown of F-15/T-38 Aircrafdt at Holloman AFB, N. Mexico (Oct/76)." The same number of sorties were planned then, as now. Part (c) of the summary states in part: "Supersonic training flights will be increased by the conversion of F-4 to F-15 aircraft. However this air combat maneuver training will take place over the White Sands Missile Range (WSMR) and will not 22

22 affect the area outside the boundaries of the WSMR. The supersonic events
ont. will increase from 550 to 1300 per year "

22 Cont.

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This subject is chosen from many others, simply to illustrate another manner in which the RDEIS is a particularly flawed document, scretching even the laypersons' logical sensibilities to unacceptable limits.

The RDEIS states that aircombat maneuvers will average Mach 1.1, and utilizing the concept of Threshold Mach (calculations only)notes one third of all sonic booms will reach the ground, resulting in no significant impact on the environment. National security will be upheld, the national defense posture maintained and the Air Force crews maximally prepared by air combat training within these limits.

Page 1-3..."The F-15 missions require accomplishment in areas set aside for supersonic flight to utilize the aircraft in a supersonic regime. This flight regime is characterized by increased maneuverability, high G-loads, and high closure rates."

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23 Page 1-9..."By operating in the subsonic flight regime only, pilots are denied valuable experience i.. the vastly different performance and handling characteristics of the aircraft in the flight envelope above Mach1.0." (added emphasis)

Elsewhere we are told (the page number escapes me) that because of the advanced design of these aircraft, pilots can slip through Mach 1.0 without noticing, and that the attention necessary to stay at Mach .99 degrades the training mission. Thus it appears that the "vastly different performance and handling characteristics"of the Mach2.5+ capable aircraft are maximal between Mach 1.0 and Mach 1.1.

23 Cont.

Page 4-20..."All participants must decrease altitude to utilize the maximum acceleration and turning of their aircraft." (Not quite the straight and level flight of Carlson's simplified method). Aviation Week and Space Technology, May 23, 1983, page 75, discusses the F-15 G-overload warning system. "The warning is continuous until the overload condition is relieved. This system permits the full 9-G limit use of the aircraft, enabling the pilot, whenever possible, to open up the flight envelope."

Page 8-1..."Due to the advanced characteristics of the F-15, supersonic flight is required if pilots are to effectively employ the aircraft in the role for which it was designed and procurred...combat ready pilots would be fully able to explore the aircraft performance capabilities and develop practice and refine sound combat tactics and habit patterns in the supersonic flight regime...". (Most pilots would agree that it is difficult to explore the flight envelope of a Mach 2.5+ aircraft while remaining between Mach 1.0 and Mach 1.1. The quote in the paragraph above is a case in point.)

23 Cont.

Next it is noteworthy that the development of the F-15 through the various models, to the F-15D and the Strike Eagle, have been directed to the objective of creating an all-weather, day-night capable aircraft, with equally great air-to-air and air-to-ground capabilities. This will of course produce great numbers of night flights for training purposes and certain types of maneuvers which will consistently generate large numbers of focused booms. Also, an ACMI like system must be installed in N.M. and Tx..

Referring back to the quote from page 1-3, it must be re-emphasized that there is nothing "set aside" about a SOA, from a pilot's viewpoint. This airspace is freely available to all aircraft, military and civilian--only at supersonic speeds it is transformed into a 'killing ground' that AOPA has correctly labelled an extreme hazard to civil aviation. The RDEIS glosses

stressed repeatedly, that their theoretical figures are conservative, are incorrect. The real atmosphere often focuses sonic booms, the effect being greater at the lower Mach numbers the AF says it will average. Scant, or no

24 paid to studies which have measured the amplification factors related to rectilinear acceleration; multiple booms created in this fashion; noting the fact that multiple, separate booms are created during turns, and superfocused booms in accelerated turns; amplifications created when the sonic boom envelopes of supersonic aircraft intersect during a pass in opposite directions and during overtaking maneuvers. It is nowhere stated that the focused boom in a turn will be "thrown" from ten to twenty miles lateral to the flight path of the aircraft turning. Audible rumbles, that many scientists term significant, occur for tens of miles lateral to the cutoff. Terrain amplification factors of 12 and greater have been measured. Amplification factors due to being near buildings can result in 4 fold or greater sonic boom overpressures (cf. calculated values). Dynamic amplification factors have been scarcely mentioned, although they constitute an impact of major proportions. Even in straight and level flight, variations of overpressures below and lateral to the flight path vary 3-4x, simply on the basis of unknown factors, presumably atmospheric turbulence. These results are from studies in which actual measurements have been performed. 24

25 Even at threshold mach, a caustic is formed. It may not reach the ground but if a resident, or one of the more than 60,000 yearly visitors to this area is standing on a hill, he or she will be on the receiving end of a sonic boom that will be at least two times that of the calculated overpressure. 25

26 It might be emphasized that most discussion relates to overpressures, both those measured by others and not used by the AF, or those theoretical overpressures calculated by the AF for this RDEIS. Peak overpressure is one 26

element that is used to judge the impact of a sonic boom, but it is not the peak overpressure that is the major correlate with the annoyance expressed by persons below. Also the AF assumes a normal distribution of data obtained from the Oceana sorties. It is clear from their charts that the data cannot be normalized in a sense that makes the data a basis for statistical predictions.

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Returning to page 3-10, one can illustrate several of the previous points. One notes that the AF hopes to demonstrate that longtitudinal accelerations of an aircraft at an altitude and Mach number above cutoff, produce relatively small areas of focused sonic booms, that are occasionally up to 2 to 5 times the overpressure of normal "N" waves, but that a highly stable atmosphere, in their own words, must exist for these events to occur. After noting Operation Jericho, the AF states that turbulence decreases or dissipates the boom; the AF notes that "the most important point is that the peak pressure of a focused boom decays more rapidly than in an "N" wave and thus the positive impulse is much lower..."

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Re-emphasizing that turbulence (i.e. the real world atmosphere) causes frequent focusing effects, even for aircraft in low Mach, level flight, that peak overpressures are not the major correlate with impact on humans, one notes that in Operation Jericho the rise times and the peak impulse of focused booms were highly significant and that the true effects of focused and superfocused booms are such that amplification factors range from 2 to greater than 9. In other words, a focused boom is a focused boom.

On page 3-11, the AF states that focused booms do not move along the ground as is the case with carpet booms and that the focal zone is fixed. The focal zone is fixed only in relation to the position of the aircraft at the time the caustic is produced, which is common sense. The focus for the

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the caustic moves along this region in exactly the same sense as a carpet boom does, before it becomes extinguished. This focal zone is usually the site of two or three separate sonic booms which occur in rapid succession

24 Cont.

24 Cont. o be confused with the 'double boom' of the 'N' wave of a normal sonic boom). These impacts have not been addressed in the RDEIS.

As noted earlier, the fact is alluded to, but not stressed, that studies have shown that the area involved with a simple longitudinal or rectilinear acceleration, even at high altitudes, is accompanied by a focused boom and then an associated area in which 4 to 6 multiple booms occur, each equaling the overpressures of the carpet boom. These booms have similar impacts on humans but are not included in the RDEIS.

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The AF states that in supersonic turns it is quite possible that sonic booms and focused booms will not reach the ground unless the Mach number and altitude exceed certain conditions. Using tables in the sonic boom literature one can easily determine whether this statement has any meaning other than to deceive.

For an fighter such as the F-15 at Mach 1.3 and an altitude of 33,000 feet, production of a focused boom can be avoided if the bank angle does not exceed 10 degrees. This translates into a heading change of 0.4 degrees per second(perhaps a slight overestimation). Thus the F-15 requires six minutes to perform a simple course reversal under the conditions devised by the AF. During this time it would travel approximately 60 miles and exit the neat ellipse, let alone the entire MOA. "Bombers and fighters in sustained supersonic flight have to make at least one focusing turn to fly back to home base because the radius of a nonfocusing turn is far too large to be practical." (Operation Jericho).

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31 Page 3-15...."This is supported by the fact that the tests conducted

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in 1968 at Tonapah, Nevada, showed sonic booms with overpressures ranging from 50 psf to 144 psf did not cause direct injuries to the exposed people." Upon reading the paper, one notes that the researchers' main conclusion was their surprise, that when the windshield was blown out of their stationwagon, the glass fragments were propelled outward for a distance of greater than 12 feet. It had been thought that sonic booms caused glass breakage with the fragments dropping neatly at the foot of the window.

Additionally, the researchers noted that the windows of all the campers parked along the low altitude routes, were blown out. By the third day, there was considerable difficulty amongst the scientists taking readings, due to the flinching and stress that occurred, beginning at the time when the aircraft first appeared, let alone the sonic boom impacted.

The AF note that no harm occurred to humans is perhaps diluted by the fact that no observations of any nature were made, other than to note that there was a fullness and ringing in the ears, or a pressure like sensation against the body. Mr. Lord, an environmental expert (AF) stated at the Valen. test hearings (Atch.7.30)..."...I know people, I, myself, have been subjected to 100 psf so I know what it sounds like—I didn't hear for a while afterwards."

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31 Cont.

To the lay person, this phrasing is reminiscent of temporary deafness. No followup studies were done. It is a fact that temporary threshold shifts are forewarnings, if repetitive, of permanent hearing loss. The AF statement is misleading at best. It is also clearly noted in the paper that the startle reflex, which the AF states will habituate, didn't. There is ample scientific documentation that habituation of the startle reflex does not occur. Where the AF so states, its experts are confusing the orienting reflex with the startle reflex. The eventual result is harm to humans via stress.

The orienting reflex (to much lower levels of overpressure than will occur in Valentine and Morenci) can to a large extent be extinguished. However, longer term studies have demonstrated that "behavioral adaptation" is actually a compensatory mechanism. After a period of 'coping', the human organism decompensates. This has been documented in human and animal studies but is ignored or misinterpreted in the AF document.

31 Cont.

Page 3-17...The AF states that there are no generally accepted techniques for predicting worst-case,long-term,health impacts from noise exposure. Dr. Worthington is delegated by the AF to represent the most pessimistic views known to the AF. Dr. Worthington has encouraged a scientific overview of the subject. To state that his views are amongst the most pessimistic on the subject of the impact of sonic booms on human beings simply indicates that the AF did not review the literature. The literature is clear that it is only a question of how bad does it get. The AF must address the health effects of chronic sonic boom exposure, in a worst case analysis, as required by NEPA, in their revised RDEIS (the RRDEIS).

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Nearly every page of the RDEIS deserves correction. It is unfortunate that farmers, ranchers, housewives, TV repairmen and assorted other commoners have to defend themselves against this misuse of scientific data. The archeological study noted in the RDEIS is close to a farce. Two of ten overflights registered "sonic booms" with overpressures of 0.15 psf or in that neighborhood!! No damage to rocks, but no mention of the rock falls precipitated at other archeological sites by sonic booms,described by others.

Alternatives are required by NEPA to be thoroughly researched. Much of what is presented is misleading or ludicrous. Weekend flights over the WSMR are dismissed on the basis of an "informal survey" of an undefined group at

Holloman AFB, citing the problem with morale should this alternative be accepted. Is it the public's responsibility to provide alternatives? The beddown statement allowed the F-15 into Holloman on the basis that no outside areas would be affected. If the F-15 flys down to 15,000 feet, and the T-38 is engaged primarily in air-to-ground gunnery, then both activities can occur at once in the same airspace with a buffer zone between them. This and weekend flights will account for all desired supersonic sorties and put them over uninhabited land. 22,3

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The costs of all alternatives may appear large, but that is simply due to the fact that the true costs have not been calculated.

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The Revised Draft statements issued for Reserve and Valentine Supersonic Operations Areas, are not adequate by the standards set forth by NEPA of 1969.

The concept of supersonic flight at low altitudes for long periods of time over human beings, has never been addressed independently (except for the high altitude SST which was cancelled). The AF documents are deceptive. No competent outside experts will evaluate these documents. The AF overflies the Papago Indians, never having completed the EIS process. As Col. Johnson told the people of Valentine (Atch 7.28) "... There are several other people who have to be asked, the Federal Aviation Administration has to be asked. It's impossible, well, I don't want to say impossible, it's improper for the U.S. Air Force to fly supersonic over any area that has not gone through a coordination process or been okayed up through the legislative level of the Government and the FAA. We get our permission from Headquarters U.S. Air Force and that's who okays it."

There is no doubt that the aircraft should be flown, and the aircrews trained to the maximum of capability. But the Air Force is only able to have its cake and eat it too, by producing a document [illegible] who will bear the impact of the proposal.

The time has come for a totally independent, technically competent group to be formed, a true forum of experts created to evaluate the concept of supersonic flight over human beings, at low altitudes; and/or a Congressional investigation should be undertaken to examine these questions on a nationwide basis and dealing with all branches of the military.

There is little doubt that these proposals will be acted upon regardless of the amount of protest, whether emotional, scientific, or otherwise. The only recourse for the common person is to recall exactly the freedoms that the government agency is working to protect and to use those freedoms to secure a just and equitable resolution of the problem.

If the Air Force uses the present inadequate document as the basis for its final EIS, then citizens should, on their own if necessary, proceed with legal action in order to obtain a permanent injunction to protect their health and welfare, the quality of their lives and the land that they live in. This should be done with the clear understanding that the government agencies involved can attain the same maximum quality of training in other ways, but will not attempt to do so unless they are forced to.

Many important issues face rural Americans today. The past several years have resulted in the creation of a public health issue and a Constitutional issue of unique proportions, that is supersonic flights of military aircraft at low altitudes over inhabited regions of rural U.S.A. Due to the small numbers of people affected, concerted defensive actions are very difficult to organize and to finance. Often, those in State and other government do not care. Thus, rural residents of mainly the Western United States must defend themselves as best possible, relying on their own resources.

In this regard, please accept this unsolicited paper, a very cursory and partial comment on the Revised Draft EIS produced by the Air Force upon their proposed supersonic flights over Morenci, New Mexico, and Valentine, Texas.

Time is ripe for the formation of a multi-State coalition of affected persons to take aggressive action on all levels to prevent further harm to both the health and welfare of thousands of persons. Very little time remains for such an action.

I would propose that the various groups already in existence in New Mexico and Texas, communicate with such groups as Concerned Rural Nevadans, and commence the formation of such a larger organization as soon as possible.

Sincerely,

Richard Bargen

Richard Bargen, M.D.

10/9/83

rcvd 15 Dec 83

Comments on the Draft Environmental Impact Statement (DEIS) on the Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training.

Submitted by: Rao and Phyllis Bateman
Kyle and Ranae Bateman
The Parrish Ranch
For presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah
29 Nov 1983

INITIAL STATEMENT: We, the above named ranch owners and Ibapah (Deep Creek Valley) residents of long standing want it known we strongly and absolutely oppose the Air Force proposal to increase restricted airspace along the Utah-Nevada border for supersonic flights and training space for F-16 fighter planes of the 388th Tactical Fighter Wing of Hill Air Force Base and other supersonic jets. The airspace being sought for expansion of supersonic flight and air-to-air combat training overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada. This completely takes in the Ibapah ranching district, its grazing properties, the Goshute Indian Reservation, and the proposed Deep Creek Mountain wilderness area. Our ranches and other properties in the Ibapah Valley are included in the proposed restricted area along with twenty-five neighboring ranches and atleast twenty additional homes.

POPULATION OF IBAPAH: Within the boundaries of Ibapah we have 200 people living in close proximity and a total of 350 people living within the proposed area. The Draft Environmental Impact Statement (DEIS) fails to recognize that the people of Ibapah live in a closely populated area, not sparsely settled as stated. We need to be recognized and taken into consideration on this proposal as we are the ones who will be adversely affected. 1.4

THE SAFETY AND WELFARE: of the people of Ibapah has been of little concern to the military. We are law abiding citizens of these Our United States and we demand consideration. The Air Force has little respect for established boundaries and little concern for Ibapah residents. Low flying jets are hazardous and sonic booms do destroy. Low flying jets means when you can hear the metal clang above the jets roar, see the flash of identification numbers beneath the plane, see the tree tops above the low flying jet, hear the loud roar right above you as you drive your automoblie down the road and you automatically duck or sometimes run out of the road, practically fall off your tractor or horse as they fly directly above you, or fly just above you over the brink of a hill, etc. The fighter pilots seem to use our ranch houses and buildings, the valley residents themselves, and our livestock for experimental runs of realistic gunnery practice and supersonic attacks. Instead of being "shell shocked", we will be "jet shocked" from intensified jet action.

THE NOISE AS WELL AS THE CONCUSSION: of the super sonic booms will annoy area people about 100% rather than the statement of the DEIS that only 12% of the people living in the area would be "highly annoyed." All the Ibapah residents are strongly against this proposal as we have already experienced damaging and explosive sonic booms and frightening roars of unexpected, low flying jets. In the hands of youthful pilots these jets are an instrument of scare and frightening tactics for the purpose of amusement in their behalf because of our startled reactions. With the intensifying of training flights and the predicted 1050 monthly sonic booms from F-16 Fighter wartime tactics, we will be blasted out of existence. If noise from low flying jets and sonic booms are not detrimental, why do babies cringe and cling to their mothers at the sound of a jet? Why do unborn babies quiver and jump within the mother at jet approach? Why do people jump and watch in angered anticipation as they watch for the jets return or the second jet? Why do grazing cattle stampede to the closest fence at the noise of a sonic boom? Human and animals alike become unnerved and can no longer function properly because of the loud, booming concussion of the unexpected sonic boom or the roar of a low flying jet. No, we can never adjust to the noise of the sonic booms or the low flying jets.

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PROPERTY DAMAGE: already has been experienced by valley residents with broken windows, cracked walls of homes and buildings including those of the school house, broken and falling tile and plaster, walls crumbling and foundations cracked. With these unstable conditions the value of our properties will drop to nothing. With this airspace expansion the high density of aircraft that will be operating over this populated area puts our lives, our livelihood, and value of our properties in jeopardy.

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IN CONCLUSION: we have shown some of the adverse effects this proposed training area would have on all Ibapah residents: the ranchers and their families, the Goshute Indians, our livestock and our homes. Our valley will no longer be a "valley of production" but a "valley of destruction", if this proposal takes effect.

RECOMMENDATION: to have the Air Force review their plan for the restricted training area and withdraw their request for the proposed training area. The military should consider alternatives to the proposed action rather then subject people of the Deep Creek Valley, their properties of the Deep Creek Mountain area, and the bordering Nevada west hills to the devastating effect of air-to-air supersonic combat training by the Hill Air Force Base F-16 fighter planes.

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Gaw & Bateman
Phyllis R. Parrish Bateman
Kyle N. Bateman
Lenae T. Bateman

Ibapah, Utah
November 10, 1983

Honorable Orrin Hatch
United States Senate
Washington, D.C. 20510

Dear Senator Hatch:

As concerned citizens and lifetime residents of Ibapah, Utah we submit the attached petition opposing the Air Force proposal to increase restricted airspace along the Utah-Nevada border consisting of 85 miles long and 25 miles wide for supersonic flights and training space of F-16 planes of the 388th Tactical Fighter Wing of Hill Air Force Base.

The Air Force indicates there isn't enough air space to effectively train pilots in realistic and wartime tactics without an increase in quantity of supersonic flight space for air-to-air supersonic combat training. The resulting effects predicted of the 1000 sonic booms per month in this area would blast the residents out of existence. It will have a devastating and hazardous effect 100 percent on the whole population of 350 people in this area rather than just the 12 percent stated by the Air Force study reported by the Associated Press and Deseret News. Some residents have read of hazardous effects from low sonic booms and low flying jets both on human beings and animals, but studies made have not been conclusive or proven and we do not want to be used as guinea pigs to substantiate the evidence of the ill effects. As United States citizens why should our lives and well being be given only slight consideration? The military has shown no great concern for the safety and welfare of the people living here.

The Air Force should use the many available areas now used for testing and training of the F-16 jets or use the uninhabited Utah Salt Flats, the oceans and other unpopulated areas rather than expanding into the Ibapah area.

Please give this proposal your immediate attention as time is running out for the study and comments on this, ending December 15, 1983. Comments on this Hill Air Force Base plan for the Air Corridor on the East corder of Nevada including Ibapah Valley and the Deep Creek Mountains are to be sent to:

Environmental Planning
Hp. AFLC/DEPV
Wright Patterson AFB
Dayton, Ohio 45433

We need your help in stopping this proposal as our lives, livelihood, and the value of our properties are in jeopardy.

Thanks for your prompt and understanding help.

Sincerely,

Rao H Bateman and Phyllis Bateman
Kyle Bateman and Ranae Bateman

Rao and Phyllis Bateman
Kyle and Ranae Bateman
of the Parrish Ranch

cc: Sen. Jake Garn
Rep. James B. Hansen
Rep. Howard Nielson
Rep. Dan Marriott
Gov. Scott Matheson

D-44

cc. to
Sen. Paul Laxalt
Sen. Chic Hecth
Rep. Harry Reid
Rep. Barbara Bucanovich
Gov. Richard H. Bryan
Tooele County Comm. Charles Stromberg
Environmental Planning Hq. AFLC/DEPV

October 20, 1983

We, the 69 white and 120 Indian people living in Ibapah, Utah on both sides of the Utah Nevada state line protest and oppose the Air Force proposal to use this area of 85 miles long by 25 miles wide for testing and training of the F-16 jet fighter planes. The area includes our fifty mile long ranching district with bordering grazing lands, the Goshute Indian Reservation and the Deep Creek Mountains.

The twenty-six ranches, and twenty additional homes within the area have experienced sonic boom destruction to their homes and buildings, foundations, walls, and windows from jet supersonic speeds. The Ibapah Elementary School suffered damage to the ceilings and brick walls of the structure with resultant plaster falling from between the bricks, and ceiling tiles falling to the floor. If one destructive sonic boom in particular had resulted from air travel from the opposite direction, the whole north side, which has glass windows, would have been shattered and would have fallen upon the children as school was in session. For damages suffered at this time, restitution was made to a nearby ranch home by Hill Air Force Base.

The livelihood from ranching is threatened as studies have proven that livestock miscarriages occur as a result of the loud explosive concussion made by the fighter planes. The sonic booms would disrupt and hinder the utilization of our grazing rights throughout this area.

36 Studies have also shown that unborn and small children suffer both hearing impairment and loss from the loud sonic booms. Neither human beings nor livestock can adjust to the loud, unexpected sonic booms made by the F-16 jet fighters traveling at supersonic speeds.

We feel the F-16 fighter testing and training should take place in unpopulated areas and strongly oppose the plan to use this Utah-Nevada area of Ibapah, Utah as the proposed test and training site.

Kyle W. Coleman — Ibapah, Utah
Gaylen J. Warner — Ibapah, Utah
Glenda K. Warner — c. Ibapah, UT
Rena T Bateman — Ibapah, Ut.
William F. Weed — Ibapah, Ut.
Barbara Hicks — Ibapah, Utah
Barbara Hicks — Ibapah, Utah
Tilly F Hill — Ibapah, UTAH
James L. Hill — Ibapah, Utah

[illegible]	Ibapah, Ut.
Mabel Bates	Ibapah, Ut.
Robert Ute	Ibapah, Ut.
Ted Christiansen	Ibapah, Ut
Scott Sherwood	Ibapah Ut
Jack Berry	Ibapah Ut
Ellen Gray	Ibapah, Utah.
[illegible] M. Steele	Callao, Utah
[illegible]	Callao Utah
[illegible] Marie Terry	Ibapah, Ut.
Kenny Kemp	Ibapah, Ut.
[illegible]	Ibapah Ut
[illegible]	Ibapah Utah
Jenny Pete	Ibapah Utah 84034
[illegible] Steele	Ibapah, Utah 84034
[illegible] Pete	Ibapah, Ut 84034
[illegible] Proctor	Ibapah, Ut 84034
[illegible] Sam	Gold Hill Utah
[illegible]	Ibapah Ut. 84034
Emery Tabbee	Ibapah Ut.
[illegible] Cook	Ibapah, UT
[illegible] Han Kooka	
[illegible] A. Mon	Ibapah, Ut. 84034

Diana McCurdy	Ibapah Ut. 84034
Julie Bishop	Ibapah Ut 84034
Gary Bishop	Ibapah, Ut. 84034
[illegible]	Ibapah ut 84034
Lillie Pete	Ibapah, Utah 84034.
Leo Pete	Ibapah ut 84034
Gary Hatstead	Ibapah Ut 84034
Bynard Sam	Ibapah, Ut 84034
Karen Steele	
Jo Ann Pete	Ibapah, Ut. 84034
Tooele Green	Ibapah Ut. 84034
Emma Knapp	Ibapah Ut. 84034
Jane Steele	Ibapah, Utah 84034
Chris Steele	Ibapah, UT 84034
Jack Rattlesnake	School Principal
Richard Hardy	Tooele, Ut 84074
Beverly Bateman	Dugway, Ut 84119
Boyd Bateman	Dugway, Ut 84119
Lucy F. Tripp	Jeli Utah 84043
Lynette Kirkpatrick	43 No 300 W. Jericho Utah 84043
Shirley Tripp	Jeli Utah
Stacie Tripp	Jeli Utah
Tracie Tripp	Jeli Utah
Selena Underwood	Ibapah, Ut 84034
Carl Carlson	Callao Utah 84034

Steele	Ibapah, Ut.
Cynthia Steele	Ibapah
Cathie Hardman	Ibapah, Ut.
Mitchell Steele	Ibapah Ut
Melissa Dorn	Ibapah Ut.
Irma Woodard	Ibapah Utah
Robert Steele	Ibapah Utah
Dorothy E. Wiskowski	Ibapah, Utah
Ronald A. Wieser	Ibapah, Utah
Millie Hardman	Ibapah, Utah
Mabel M. Salazar	Ibapah Ut 84034
Evelyn Pete	Ibapah Ut. 84034
Edward Dick	Ibapah Ut. 84024
Amos Murphy	
Christy Steele	Ibapah, Ut. 84034
Raymond Steele	Ibapah Ut 84
BEATRICE STEELE	Ibapah, Ut. 840
Carl Knicks	Ibapah Ut 84
Gerald Crook	Ibapah Utah 840
Marilyn Sims	Callao, Utah
Alan Sims	Callao Utah

Dale Harris	Ibapah, Utah
Watson	Pleasant Ut.
Bernard Steele	pleasant city
Christy Halstead	Ibapah, Utah
Dale Lee	Ibapah Ut
Joyce Cook	" "
Mac Lee	Ibapah, Ut
Kyle Lee	Ibapah Utah
Norma Kelley	Ibapah Utah
Darlene Green	Ibapah Utah
Ina Steele	Ibapah Utah
Beatrice Steele	Ibapah, Utah
Barbara Steele.	Ibapah, Utah
Karen Steele	Ibapah Utah
Lee Moon	" "
Ronnie McCoyd	IBAPAH, Ut.
Roy J Baker	Ibapah, Ut
F. W. Smith	Ibapah Utah
Nan Edith Lane	" "
Darrell Pete	Gold Hill, Utah
Doris Steele	Ibapah Utah
Doreen Steele	Ibapah, Ut
Loretta Knight	Ibapah, Ut.
Clayton Murphy	Ibapah, Utah 84031
Molly D McCurdy	Ibapah, Utah 84031
	Ibapah, Utah 84031

(See over)

[illegible] Cook	Ibapah, Utah
[illegible] Baker	Ibapah Utah
[illegible] Baker	Ibapah, Ut
[illegible] Baker	Ibapah, Ut
[illegible] Baker	Ibapah, Ut
[illegible] Mc	Ibapah Ut
[illegible] Peto	Ibapah, Utah
[illegible] Stahl	Ibapah Ut
[illegible] Moon	Ibapah, Ut
[illegible] Stahl	Ibapah, Ut
[illegible] Hooper	Ibapah Utah
[illegible] Steele	Ibapah Ut
[illegible] Baker	Ibapah, Ut.
[illegible] & Jimmie	Ibapah, Ut.
[illegible] Stahl	
[illegible] Peterson	Callao Utah
[illegible] Wright	Callao Utah
	Burnt Creek
[illegible] Stahl	Ibapah, Ut.
[illegible] Mountain	Ibapah, Ut.
[illegible] Murphy	Ibapah Ut
[illegible] Stahl	Ibapah Ut
[illegible] Miller	Ibapah Utah-Nev.
[illegible] Moon	Ibapah, Ut.
[illegible] Stahl	Ibapah, Ut.

Lydia P. Bateman	Ibapah, Utah	84034
Leo A Bateman	Ibapah, Ut	84034
[illegible] Kesselgesser	1795 S. 3500 W.	Ogden Ut 84401
Nola Kesselgesser	1795 S. 3500 W.	Ogden, Ut 84401
Enid Trimble	Box 982	McGill Nevada 89318
[illegible] Z. Foley	Ibapah	Ut 84034
Duane Hicks	Ibapah	Ut 84034
Pat Burnham	Ibapah	Ut 84034
Danny Dennis	Ibapah	Ut 84034
Ethelen Murphy	Ibapah	ut 84034
Lee [illegible]	Ibapah	ut 84034
Tom Gillespie	Ibapah	Ut 84034

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Gerald C Bates

November 21, 1983

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Lanny Batts

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Marlene Batio

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Nona Bates

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and schools.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Grandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Peggy Bates
Hendry Creek Ranch
Garrison, Ut. 84728

November 21, 1983

SENATOR GARN

Nov 29 12 00 AM '83

Dear Senator Garn,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people.

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Peggy Bates
Hendry Creek Ranch
Garrison, Ut. 84728

November 21, 1983

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Vicky Scott
Hendrys Creek Lane
Utah

November 21, 1983

Dear Sirs

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Bartoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly opposing** the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Vincent Bates

Student Body President

West Desert School

rcvd 28 Nov
EPC

863 Rosewood Lane
Layton, Utah
Nov 14, 1983

Environmental Planning
Hq. AFLC/DEPY
Wright Patterson Air Force Base
Dayton, Ohio 45433

We are writing to strenuously protest the proposal by the Air Force to increase the restricted air space along the Utah/Nevada border for supersonic flights of the F-16 aircraft.

Our family owns ranches and other property in the Ibapah valley otherwise known as the Deep Creek valley which runs alongthe Utah/Nevada border. This valley, the Deep Creek mountains which border the east side of the valley and the hills to the west in Nevada are included in the proposed restricted area.

1,4 We understand from news releases and contact with Hill AFB that the Environmental Impact Statement says only about 350 people live in the proposed corridor. They, however, fail to recognize that over 200 of these people are concentrated in the Deep Creek valley and the Goshute Indian reservation at the south end of the valley. It should also be noted that the Deep Creek mountains are being considered for a wilderness area. 1,4

18, 31 Another point that should be considered is the statement in the draft Environmental Impact Statement that only 12% of the people living in the area would be "highly annoyed" by the sonic booms. This is completely in error and unrealistic. In fact the number should be nearly 100%. Our family has conducted an informal survey and determined that everyone in the Deep Creek valley (over 200 people) are strongly against the proposal. We believe that no one should be exposed to the devastating effects of sonic booms and low flying fighter aircraft. Also the statement there would be no adverse health effects on humans and no significant problems for domestic and wild animals is incorrect. One only needs to observe the reaction of grazing cattle to low flying aircraft and sonic booms to know how wrong this is. 18 31 37

Air Force planes have been using this area for a number of years for supersonic flights in violation of current rules and regulations so we are very familiar with the impact of supersonic flights and sonic booms. The predicted 38 sonic booms per day or 5 booms per hour is completely unacceptable. The ones now being experienced are causing enough problems for school children (yes there is also a school in the valley), people, grazing livestock, wild horses and wild life, and property damage. Objections to these flights have been made to Hill AFB but no action has been taken. We have also made a claim for damages which has been paid in part.

38 Fighter aircraft on training flights do crash all to often (35 F-16 aircraft since 1979) and so it is very hard to understand why the Air Force would continue with their plans for training flights over the Deep Creek valley with total disregard for the safety of the inhabitants. 38

It is quite evident that to include the Deep Creek mountains, the Deep Creek valley and the Nevada hills to the west in this corridor is wrong as it would be very detrimental to the ranchers and their families, the Indians, livestock, wildlife and the wilderness study area of the Deep Creek mountains. We, therefore, request you review your plan for the training corridor, withdraw your request for the proposed training area and exercise one of your stated options to seek a more suitable area. 4

Sincerely,

Blanche Parrish Bean
BLANCHE PARRISH BEAN

Charles W. Bean
CHARLES W. BEAN

Copies to:
1. Governor of the State of Utah
2. Governor of the State of Nevada
3. United States Senators from Utah
4. Representatives from Utah
5. Utah Wilderness Association
6. Hill AFB

863 Rosewood Lane
Layton, Utah 84041
Dec 12, 1983

Environmental Planning
Hq. AFLC/DEPY
Wright Patterson AFB
Dayton, Ohio 45433

Subject: DEIS on establishment of additional air space (restricted) along the Utah/Nevada border for Supersonic Flight Training.

Ref: Our previous letter of Nov 14, 1983.

Enclosed are copies of written statements submitted by our family at the hearing held in Ibapah, Utah on Nov 29, 1983. These are for your records and further consideration.

Sincerely,

Subject: Proposed Restricted Airspace For Supersonic Flight Training Along Utah/Nevada Border

Written comments for presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah 29 Nov 1983.

Submitted by: Parrish Estate, Ibapah, Utah
Blanche L. Parrish Bean
Phyllis R. Parrish Bateman
Joyce C. Parrish Cook

INITIAL STATEMENT:

The Parrish family desires to go on record as being strenuously opposed to the Air Force proposal to increase the restricted airspace for supersonic and subsonic training flights of fighter aircraft (primarily F-16 aircraft) along the Utah/Nevada border.

The Parrish family owns ranches and other property in the Ibapah valley (Deep Creek valley) which runs along the Utah/Nevada border and is included in the proposed restricted area. While we are generally opposed to the whole proposal we will confine our remarks relatively to the Deep Creek valley and the adjacent areas on the east and west side.

POPULATION DENSITY:

1 The Draft Environmental Impact Statement (DEIS) states the proposed expansion area is sparsely settled with only about 350 people living there. The fact is that over 200 of these people live in the Deep Creek valley which fact the DEIS fails to recognize which we feel is very significant. Also there is a school house in the valley attended by all the children living there. We feel this fact alone should force reconsideration of the proposal. 1

SAFETY:

38 The high density of aircraft that will be operating over this concentration of people poses a very significant safety problem. Fighter aircraft do crash (36 F-16 aircraft since 1979) . It is inconceivable how the Air Force can ignore this fact and continue with their present plan which will expose the people and school children in the valley to this unacceptable hazard. 38

PEOPLE IMPACT:

18,31 Another point that should be considered is the statement in the DEIS that only 12% of the people living in the area would be "highly annoyed" by the sonic booms. This is completely in error and unrealistic. In fact this number should be nearly 100%. Our family has conducted an informal survey and determined that all of the people contacted were strongly against the proposal and very concerned with the low flying aircraft and sonic booms. 18, 31

PIEVIOUS AIR FORCE ACTIVITY:

3

According to published maps the Deep Creek valley is not included in the current training areas yet the Air Force has been using this air space for subsonic and supersonic flights for a number of years in violation of current rules and regulations. As a result, we, and other people living in the valley are very familiar with the impact of training flights and sonic booms. The predicted 38 sonic booms per day or 5 per hour is totally unacceptable. The ones now being experienced are causing enough problems for school children, people and livestock. Subsonic flights at low altitudes are a common occurance. The actions of fighter pilots seem to indicate they are using ranch houses, ranch buildings, people and livestock for practice strafing runs. Experiences of members of the Parrish families can attest to this fact. Objections to these flights have been made to Hill AFB but no action has been taken. 3

It would appear that the Air Force has little respect for established boundaries and little concern for the inhabitants of the Deep Creek valley. From past experience we believe it is quite evident that if this valley is included in the proposed training area the impact on the valley would be devastating.

PROPERTY DAMAGE:

Property damage has been experienced in the valley and it is certain that if the plan is approved much more can be expected. Our family has made a claim for property damages which has been paid in part.

PROPERTY VALUE:

33

No one can deny that property values will be significantly reduced if the Air Force plan is approved. Sale of ranch land and grazing land will be very difficult if not impossible unless the asking price is substantially reduced. Why should the land owners in the valley be so penalized? What, if any, recourse do they have? 3

OTHER CONSIDERATIONS:

37,4

The statement in the DEIS there would be no adverse effects on humans and no significant problems for domestic or wild animals is incorrect. One only needs to observe the reaction of grazing cattle to low flying aircraft and to sonic booms to know how wrong this is. Just ask any rancher or his family how they feel when subjected to the conditions of training flights. It should also be noted that the Deep Creek mountains are being considered for a wilderness area. 37 4

CONCLUSION:

It is quite evident that to include the Deep Creek valley, the Deep Creek mountains and the Nevada hills to the west in this proposed training area is wrong as it would be very detrimental to the ranchers, their families, the Indians, livestock, wildlife and the wilderness study area of the Deep Creek mountains. In the face of the facts previously stated it is very hard to understand how the Air Force can continue to seriously consider including the Deep Creek valley and adjoining lands in the restricted area for high density fighter aircraft training.

RECOMMENDATION:

4 We, therefore, request the Air Force review their plan for the restricted training area, withdraw their request for the proposed traing area and exercise one of their stated options for a more suitable area. 4

Comments on the Draft Environmental Impact Statement (DEIS) on the Establishment of the Grandy Range Extension and adjacent restricted airspace as an area for Supersonic Flight Training.

Submitted by: Rao and Phyllis Bateman
Kyle and Renae Bateman
The Parrish Ranch
For presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah
29 Nov 1983

INITIAL STATEMENT: We, the above named ranch owners and Ibapah (Deep Creek Valley) residents of long standing want it known we strongly and absolutely oppose the Air Force proposal to increase restricted airspace along the Utah-Nevada border for supersonic flights and training space for F-16 fighter planes of the 388th Tactical Fighter Wing of Hill Air Force Base and other supersonic jets. The airspace being sought for expansion of supersonic flight and air-to-air combat training overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada. This completely takes in the Ibapah ranching district, its grazing properties, the Goshute Indian Reservation, and the proposed Deep Creek Mountain wilderness area. Our ranches and other properties in the Ibapah Valley are included in the proposed restricted area along with twenty-five neighboring ranches and atleast twenty additional homes.

POPULATION OF IBAPAH: Within the boundaries of Ibapah we have 200 people living in close proximity and a total of 350 people living within the proposed area. The Draft Environmental Impact Statement (DEIS) fails to recognize that the people of Ibapah live in a closely populated area, not sparsely settled as stated. We need to be recognized and taken into consideration on this proposal as we are the ones who will be adversely affected.

THE SAFETY AND WELFARE: of the people of Ibapah has been of little concern to the military. We are law abiding citizens of these Our United States and we demand consideration. The Air Force has little respect for established boundaries and little concern for Ibapah residents. Low flying jets are hazardous and sonic booms do destroy. Low flying jets means when you can hear the metal clang above the jets roar, see the flash of identification numbers beneath the plane, see the tree tops above the low flying jet, hear the loud roar right above you as you drive your automoblie down the road and you automatically duck or sometimes run out of the road, practically fall off your tractor or horse as they fly directly above you, or fly just above you over the brink of a hill, etc. The fighter pilots seem to use our ranch houses and buildings, the valley residents themselves, and our livestock for experimental runs of realistic gunnery practice and supersonic attacks. Instead of being "shell shocked", we will be "jet shocked" from intensified jet action.

THE NOISE AS WELL AS THE CONCUSSION: of the super sonic booms will annoy area people about 100% rather than the statement of the DEIS that only 12% of the people living in the area would be "highly annoyed." All the Ibapah residents are strongly against this proposal as we have already experienced damaging and explosive sonic booms and frightening roars of unexpected, low flying jets. In the hands of youthful pilots these jets are an instrument of scare and frightening tactics for the purpose of amusement in their behalf because of our startled reactions. With the intensifying of training flights and the predicted 1050 monthly sonic booms from F-16 Fighter wartime tactics, we will be blasted out of existence. If noise from low flying jets and sonic booms are not detrimental, why do babies cringe and cling to their mothers at the sound of a jet? Why do unborn babies quiver and jump within the mother at jet approach? Why do people jump and watch in angered anticipation as they watch for the jets return or the second jet? Why do grazing cattle stampede to the closest fence at the noise of a sonic boom? Humans and animals alike become unnerved and can no longer function properly because of the loud, booming concussion of the unexpected sonic boom or the roar of a low flying jet. No, we can never adjust to the noise of the sonic booms or the low flying jets.

PROPERTY DAMAGE: already has been experienced by valley residents with broken windows, cracked walls of homes and buildings including those of the school house, broken and falling tile and plaster, walls crumbling and foundations cracked. With these unstable conditions the value of our properties will drop to nothing. With this airspace expansion the high density of aircraft that will be operating over this populated area puts our lives, our livelihood, and value of our properties in jeopardy.

IN CONCLUSION: we have shown some of the adverse effects this proposed training area would have on all Ibapah residents: the ranchers and their families, the Goshute Indians, our livestock and our homes. Our valley will no longer be a "valley of production" but a "valley of destruction", if this proposal takes effect.

RECOMMENDATION: to have the Air Force review their plan for the restricted training and withdraw their request for the proposed training area. The military should consider alternatives to the proposed action rather then subject people of the Deep Creek Valley, their properties of the Deep Creek Mountain area, and the bordering Nevada west hills to the devastating effect of air-to-air supersonic combat training by the Hill Air Force Base F-16 fighter planes.

Rae & Bateman

Phyllis R. Parrish Bateman

Kyle N. Bateman

Lenae T. Bateman

RECOMMENDATION:

We, therefore, request the Air Force review their plan for the restricted training area , withdraw their request for the proposed traing area and exercise one of their stated options for a more suitable area.

1401 Earl Drive
Reno, NV 89503
October 17, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB
Ohio 45433

Dear Sir:

5 I have recently learned of the proposal to turn part of Eastern Nevada into a supersonic operations area. I am writing to formally request a 40 day extension in the comment period, from Oct. 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. 5

Thank you.

Sincerely,

Elizabeth Bernheimer

Elizabeth Bernheimer

cc: Representatives Vucanovich and Reid
Senators Laxalt and Hecht

October 17, 1983

The Honorable Harry Reid
House of Representatives
Washington, D.C. 20515

Dear Representative Harry Reid:

I was shocked to learn that the [redacted] for the creation of a 2,985 square mile supersonic operations area. There are and have been no public hearings planned. 5

Knowing of your concern for Nevada I do hope that you will use your influence in obtaining a 90 day extension so that public hearings can be held in this state. 6

Thank you for your help in this matter.

Sincerely,

Elizabeth Bernheimer

Elizabeth Bernheimer

1401 Earl Drive
Reno, NV 89503

Dec. 1, 1983

I was unable to attend the hearing held here in Elko this date. My feelings regarding restricted airspace for supersonic operations on the Nevada/Utah border are as follows:

6 (1) What are the long term affects & impacts of sonic booms on health of residents. 6

37 (2) How will it impact wildlife? 37

33 (3) What is the economic impact of restricted airspace on economic development (tourism for example) 33

35 (4) Why punish rural populations? Could this be accomplished over water for example? 35

Thank you,
Sandy Bennecke

JON L. BILYEU
Assemblyman
District No. 33
P.O. Box 511
Elko, Nevada 89801
Office 738-3171

COMMITTEES
Member
Judiciary
Natural Resources, Environment, and Agriculture
Health and Welfare

Nevada Legislature

SIXTY-SECOND SESSION

October 6, 1983

The Honorable Barbara Vucanovich
Cannon Office Building, Room 507
Washington, D. C. 20515

Dear Barbara:

As you are undoubtedly aware, the United States Air Force has proposed an extension of the MOA in Eastern Nevada.

9 While I have not examined the proposal in detail, I am somewhat concerned over further limitations of flight by civilian aircraft. As one who is a sometimes pilot and who depends heavily on private transportation to travel around the State of Nevada, I am concerned about further restrictions on air space. This is particularly true because of the already heavy military utilization of the air space over Nevada and because of proposals which are pending by the United States Navy in the Fallon area. I rather suspect that there is little, if any, coordination between the various Armed Services, and little, if any, coordination of use. Because of existing MOAs, direct flight from different points in Nevada is often difficult, if not impossible, for civilian aircraft. Before further areas are considered for MOA approval, I would feel that it would be incumbent upon the Department of Defense or Congress to conduct a review of existing MOAs and their utilization. 9

While I am an advocate of a strong national defense, nevertheless the continued expansion of MOAs over Nevada places a heavy burden upon the people of this State. In addition to the legitimate concerns of private pilots and commercial airlines, there are, of course, legitimate health, safety, and environmental concerns of the public as a whole.

39 I would strongly urge, either through Congressional action or Department of Defense action, before other additional MOAs are requested and/or approved, that there be a study and review completed of the existing MOAs and their utilization. 39

Thank you for your consideration.

For information purposes, I am sending copies of this letter to our other Congressional delegates.

Very truly yours,

Bill Bilyeu

BYRON L. BILYEU

BLB/lem

cc: Honorable Paul Laxalt
Honorable Chic Hecht
Honorable Harry Reid

Nov 7 1983

Dear Senator Garn,

I don't like sonic booms do you? They are nerve racking, don't you agree?

RECEIVED
SENATOR GARN
NOV 14 12 00 PM '83

I'm all upset about this Air Force petition to test F-16 here on Utah's west desert.

I moves out here for the peace and quit It would be more peaceful under the 215th So freeway in S.L.C, than out here if that thing goes through.

Please don't let it.

Thank You
Karen L Björkman

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JOHN PAUL KENNEDY
GEORGE J. ROMNEY
SCOTT C. PUGSLEY
MARK H. ANDERSON
GEORGE RICHARD HILL
RICHARD M. HYMAS
CLARK B. FETZER
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(801) 521-0800

JOHN S. BOYDEN
(1906-1980)

COALVILLE OFFICE
MAIN & CENTER STREETS
COALVILLE, UTAH 84017
(801) 336-2020

December 16, 1983

Mr. Keith Davis
2849 ABG/DEEXX
Hill A.F.B., Utah 84056

Re: Goshute Comments to the Draft Environmental Impact Statement Regarding Supersonic Flight Training in the Goshute Range Extension.

Dear Keith:

Pursuant to our conversation of December 12, 1983, I am enclosing for your review copies of the material sent by the Confederated Tribes of the Goshute Reservation to Wright-Patterson A.F.B., Ohio.

Thank you for your consideration in this matter. If you desire further information or clarification of the Tribe's concerns with the proposal please feel free to call me at (801) 521-0800.

Sincerely,

Paul H. Ashton

PHA/brz
encl.

JOHN PAUL KENNEDY
GEORGE J. ROMNEY
SCOTT C. PUGSLEY
MARK H. ANDERSON
GEORGE RICHARD HILL
RICHARD M. HYMAS
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December 16, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson A.F.B., Ohio 45433

Re: Goshute Comments to Draft Environmental Impact Statement Regarding Supersonic Flight Training in the Gandy Range Extension.

Dear Sirs:

Enclosed are the comments of the Confederated Tribes of the Goshute Reservation to the Air Force Draft Environmental Impact Statement regarding establishment of the Gandy Range Extension as an area for supersonic flight training.

Also enclosed is a resolution of the Business Council of the Confederated Tribes of the Goshute Reservation formally opposing the Air Force proposal, to the extent that it includes the Goshute Reservation within the proposed supersonic flight area, and a written statement by Vyrie Murphy, Council Secretary. The resolution and statement are incorporated in and made a part of the Tribes formal comments to the Draft Environmental Impact Statement.

The Tribe has also instructed us to enclose for your review the Comments of the Shoshone Joint Housing Authority, the Comments of Rae Bateman, Phyllis Bateman, Kyle Bateman, Ranae Bateman, and a letter of the Batemans to Governor Scott Matheson dated December 8, 1983.

If further information or clarification of the Tribe's concerns is desired please call Mr. Kennedy or Mr. Ashton of this office at (801) 521-0800.

Sincerely,

BOYDEN, KENNEDY & ROMNEY

By John Paul Kennedy
John Paul Kennedy

By Paul H. Ashton
Paul H. Ashton
Attorneys for the Goshute Tribe

PHA/brz
encl.
cc: Chester Steele
Keith Davis

COMMENTS OF THE CONFEDERATED TRIBES
OF THE GOSHUTE RESERVATION

Date: December 9, 1983

DRAFT ENVIRONMENTAL IMPACT STATEMENT REGARDING ESTABLISHMENT OF A GANDY RANGE EXTENSION AND ADJACENT RESTRICTED AIRSPACE AS AN AREA FOR SUPERSONIC FLIGHT TRAINING

The Confederated Tribes of the Goshute Reservation, hereinafter Goshute Tribe, offer the following comments with regard to the proposed Draft Environmental Impact Statement submitted by the Air Force, hereinafter DEIS. Before setting out the Tribe's formal comments, however, it is appropriate to make a short statement on the origins of the Goshute tribe and its relationship to the United States government.

From time immemorial until the coming of the white man the Goshute Tribe exclusively occupied and possessed an area of approximately six million acres of land in the western part of the State of Utah and in the eastern part of the State of Nevada. By gradual encroachment of whites, settlers and others, and the acquisition and taking of the lands by the United States for its own use and benefit, the Goshute's way of life was disrupted and they were deprived of all of their lands except that which now is known as the Goshute Reservation. Now, by the proposed United States Air Force action, the United States appears to want to deprive the Goshutes of even this small area by subjecting the reservation to a continuous bombardment of sonic booms and pollution.

The comments of the Goshute tribe to the proposed Air Force action are as follows:

I. PURPOSE OF AND NEED FOR ACTION

Regarding the Air Force's description of the Utah Test and Training Range (UTTR) the Tribe is concerned with the cycle of increased use that is apparent within the description. That is, it appears from the description that as the ability to more precisely plan and forecast the total usage of the UTTR has increased there has been a greater demand on the range, thereby increasing the demands for an expansion or reclassification of the UTTR. If the reclassification of the Gandy Range extension is approved, therefore, would it not be logical to suppose, based on past expansion of use, that the Gandy Range will be used to a greater extent than that presently projected in the DEIS. For example, while the DEIS focuses on the use of the range by the 388 Tactical Fighter Wing (TFW), isn't it possible, and indeed isn't it probable, that the range will be used by more than the 388 TFW but will also become the location of various "red flag exercises" and an excuse to base more supersonic jets at Hill Air Force Base?

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The Tribe is also concerned with the statement on page 3 of the DEIS which implies that the Air Force has already determined that it shall upgrade various HAMOTS sites in the southern range of the UTTR complex without first considering the possibility of carrying out the upgrading in the north range. It is the Tribe's belief that such a decision should not be made until after a decision has been arrived at regarding the Gandy Range since the Air Force should not expend the money on the southern range if, in weighing the environmental impacts, it is determined that the northern range would be a better location for expansion of a supersonic flight area.

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Turning to Section 1.2 of the DEIS, Mission Requirements, the Goshute tribe does not dispute that the 388 TFW and 419 TFW have need to practice their air-to-air combat exercises in a realistic atmosphere. Nonetheless, the Tribe is concerned with the Air Force propensity to continually expand the amount of air space necessary for such exercises. For example, in the Final Environmental Impact Statement, "F-16 Beddown at Hill AFB, Utah," dated November 16, 1977, the Air Force stated that the airspace already approved for supersonic flight would satisfy the requirements of the F-16 mission. In spite of such statement, however, the Air Force was contemplating the expansion into the Gandy range area by 1978. How can the Goshutes be assured, therefore, that just because the Air Force may get approval for supersonic flight at 5,000 feet AGL that shortly thereafter the Air Force won't demand supersonic flight down to 1,000 feet AGL in order to duplicate "realistic war-time training?" Further, beyond the Air Force's assurances, that supersonic flight training will be limited to 5,000 feet AGL, the members of the Goshute tribe have experienced too many instances of pilot "abuse" to not wonder if the Air Force can enforce the 5,000 feet AGL limit.

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II. PROPOSED ACTION AND ALTERNATIVES

The Goshute Tribe has a number of concerns with Section 2.1.1 of the DEIS, Proposal. First, the Goshute Tribe is concerned that the DEIS makes no reference whatsoever to the proposed Federal Aviation Administration's action to make the airspace over the Gandy Range a restricted zone. Second, the Tribe is concerned that the DEIS fails to properly address the impacts that will occur by jets other than the F-16's of the 388 TFW which

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will use the Gandy supersonic area. The Air Force admits that "because of their shape and size, [these] other aircraft may create sonic booms of greater intensity," DEIS at 9, but refuses to address the impacts since the "vast majority of the aircraft training involving supersonic speeds will be by F-16 aircraft." The Goshutes believe this to be completely unsatisfactory and would hope that the Air Force will conduct further studies as to the impact of these "other aircraft." Third, the Tribe is concerned with the use of data collected in studies of the F-15 when the chart on B-24 of the DEIS shows that the F-15 and F-16 put out different intensities of sonic boom activity. Finally, the Tribe is concerned that the figure of 850 to 1,050 aircraft going supersonic per month does not properly take into consideration the potential use of the supersonic range for special exercises such as those discussed on pages 7 and 8 of the DEIS. That is, the DEIS states that the 1,050 figure is arrived at by examination of the needs of the 388 TFW, and does not take into consideration the conversion of the 419 TFW to F-16 aircraft, see page 7, nor the use of the area by "other craft," see preceding sentence, nor "the use of the area by aircraft from other bases." Because of this failure, the Goshutes believe they have not been fully apprised of a "worse case situation" as they are entitled to under 40 C.F.R. Section 1052.22.

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Regarding Section 2.1.2 of the DEIS, Background of Proposed Supersonic Flight Airspace, the Goshute Tribe desires to express its belief that, at minimum, the Air Force proposal should not be adopted until radar coverage is complete over the entire Gandy range extension so as to ensure that if Air Force pilots violate the altitude restrictions they may be properly disciplined.

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Regarding the different type of air combat training techniques that will be utilized set forth in Section 2.1.3 of the DEIS, Training in the Proposed Supersonic Flight Airspace, the Goshute Tribe believes further study is necessary to determine how sonic booms promulgation is affected by the various training methods. That is, it is the Goshute belief that a DEIS based upon data obtained on aircraft flying in a level flight is not representative of the type of sonic boom promulgation that will occur over the proposed supersonic flight area. Specifically, the Goshute Tribe would like further information on the probabilities of "focus" booms being generated when there is more than one aircraft participating in the training such as that contemplated in Section 2.1.3.3. In addition, in regard to the Dissimilar Air Combat Tactics training, noted in Section 2.1.3.4, the Tribe would like to know what differences in sonic boom promulgation will occur with use of the F-5, F-4, or A-7 aircraft and whether such differences have been taken into consideration by the Air Force.

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Regarding Section 2.1.4 of the DEIS, Quantities of Proposed Training, the Goshute Tribe once again expresses its concern that the number of sorties which are predicted to go supersonic are too conservative. For example, the Air Force admits that when the 419 TFW changes over to the F-16 the number of sonic flights will increase by approximately 24%. In addition, it is of concern to the Goshute Tribe that it is not known whether the number of sorties per month is an average number per month for a year or whether the number will be the maximum expected for any one month. If the summer months will have greater number of sorties than 1,050 that go supersonic, then the impacted people ought to be made aware of such and the Environmental Impact Statement should examine it.

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In a similar vein, the Goshute Tribe is concerned with the consistent use, throughout the DEIS, of averages spread over 24 hours, such as 30 to 38 booms per day, when in reality the flight period will be much shorter such as eight hours. To the extent, therefore, that the DEIS uses 24 hour averages, and implies that the sonic booms will be spread over the same, the DEIS is deceiving. It is the Goshute belief that the DEIS would have been better if it had come right out and stated what the flying day would be and the number of booms to hit the ground per hour. By the Tribe's reckoning, assuming an eight hour flight day, at 38 sonic booms per day it is probable that the Goshutes could expect five booms per hour or one about every twelve minutes and, with the conversion of the 419 TFW to F-16 the Goshutes could expect a sonic boom every nine to ten minutes. Not only does the Goshute Tribe believe this is totally unacceptable over an inhabited area but is concerned that this estimate may be too conservative during summer months.

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Regarding Section 2.1.5 of the DEIS, Location of Proposed Training, the Goshute Tribe is concerned with the inclusion of Antelope Valley as an area for supersonic flight. Further, the Tribe is concerned with the tone of the section which implies the Air Force has already determined to upgrade the HAMOTS system in the southern range without first adequately examining the possibility of upgrading such HAMOTS in another location.

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Turning to the alternatives to the proposed action, set forth in Section 2.2 of the DEIS, the Goshute Tribe does not believe the Air Force has exercised enough imagination in determining the best alternative with the least environmental impact. Specifically, while the Goshute Tribe agrees that F-16 combat pilots should be totally prepared to defend the national interest of the

United States, it does not believe that such preparation need be at the expense of the Goshute people. The Air Force states, within its "No Action" alternative, that due to high priority national research and development projects, special exercises, and F-16 air-to-ground training the supersonic area presently existing is unable to accomodate the local supersonic F-16 air-to-air sorties. Nowhere in the DEIS does the Air Force discuss the possibility of lessening the use of the present supersonic area for such research and development and air-to-ground exercises. In the 1977 Final Environmental Impact Statement dealing with the beddown of F-16's at Hill Air Force Base the Air Force said the existing supersonic space would be sufficient. The Goshute Tribe wonders if within that Final EIS the Air Force discussed the potential expansion of non-supersonic related training in the area. It seems to the Goshute Tribe that the first alternative that should be considered by the Air Force in meeting its needs for further supersonic flight training, is the better utilization of the current supersonic space and the movement from within that space of exercises for which the space was not originally authorized.

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As for the other areas considered by the Air Force for supersonic flight training, it is the Goshute belief that the Air Force has been unduly restricted by existing boundaries and that they have failed to consider the possibility of modifying the boundaries of the existing MOA's or Restricted Air Space. For example, the Air Force recognizes in Section 2.2.2.2.2 that Restricted Airspace R-6404 meets all the selection criteria except size, yet the Air Force seems unable to come up with an alternative in which R-6404 would be expanded to take up more space in the Lucin MOA west and north of R-6404. The Lucin airspace seem to have a population which is as sparse as that

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within the Gandy range area as well as being closer to Hill Air Force Base. The Air Force seems to reject the use of the Lucin MOA based on a few ideas which the Goshutes do not believe justify imposing the supersonic flight area upon their people. First, the Air Force states that the pilots would prefer to have mountains or mountain ranges for "masking" purposes, yet the DEIS recognizes that the optimum geography for a supersonic area would be of a large area made up of valleys. Second, the Air Force states that the area is not within the HUS Arena described in Section 1.1.2., yet the Air Force ignores the fact that the northern range appears to have HAMOTS which can be upgraded to handle the supersonic area. Third, the Air Force states that it has received "noise" complaints out of the Lucin MOA, yet ignores that except for the poor communication system out of the Gandy Range MOA numerous complaints would have been registered. Finally, the Air Force states that the reclassification of the Lucin airspace would interfere with commercial airways, yet the Air Force fails to adequately balance the consideration of the health and well-being of people on the ground vis-a-vis the convenience of people flying by means of the airlines.

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The Air Force recognizes that the southern portion of the Lucin area has a sparse population, e.g., the Salt Flats. Why is it not possible to combine this part of Lucin with R-6404?

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Turning to the alternative of using Restricted Airspaces R-6402 and R-6405, the Air Force recognizes that "together these airspaces meet the selection criteria." The Air Force seeks to avoid using this area, however, by stating that "usage of this land area restricts it from consideration for the supersonic flight airspace above." The Goshute Tribe believes that such

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usage should be enumerated by the Air Force inasmuch as it appears that the only reason such area is not utilized, as opposed to the Gandy Range Area, is simply because it would interfer with other "military" personnel. It is the Goshute belief that the military should be the ones that should be subjected to the sonic booms and not the civilian population who have not consented to such sonic booms.

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Regarding the option of using the Sevier MOA, the Goshute Tribe believes that once again the Air Force has been unduly restricted in its thinking. If the Air Force were to combine Restricted Airspaces R-6402 and R6405 plus portions of the Sevier MOA they would have ideal location for supersonic flight training without interfering with the Goshute way of life.

Finally, as to the possibility of using distant supersonic flight airspace, the Goshute Tribe recognizes some of the impracticalities of such a proposal. Nonetheless, the Goshute Tribe feels it is ironic that the Air Force talks about the morale of their personnel but seems to ignore the morale of the Goshute people and those others who, under the Gandy Range Area, would be subjected to a continuous bombardment of sonic booms. Further, while the Goshute Tribe recognizes that the 388 TFW brings a lot of economic advantages to the State of Utah, they do not believe that such advantages should blind the Air Force to the potential physical and phychological harm that can come to the Goshute people if their proposal is approved. If no such potential harm exists, however, then it is the Goshute belief that it might be fairer if the supersonic flight training took place over those metropolitan areas which receive that economic advantages of Hill A.F.B.

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Turning to the last alternative considered by th Air Force, changing the geographic or vertical limits of the proposed sup rsonic flight airspace, the Goshute Tribe once again believes that the United States Air Force has ignored the possibility of combining different alternatives. Specifically, the Goshute Tribe believes that the Air Force has not given enough consideration to the possibility of expanding the geographical area for supersonic flight training to include <u>portions</u> of Gandy MOA, Sevier MOA, and Restricted Airspaces R-6402 and R-6405, with a flight restriction over and around the Goshute Reservation, including that portion of the Goshute Reservation just south of Ibapah, Utah (which the Air Force has failed to place on any of their maps in the DEiS). While this would preclude the use of Antelope Valley for supersonic flight, it is the Goshute belief that the use of other MOA's and restricted airspace to the north, south and east of the reservation would more than make up for this loss. In addition, the Goshute Tribe believes that the Air Force has not adequately addressed the need to have a vertical minimum altitude of 5,000 feet AGL. The Air Force states throughout the DEIS that most sonic booms will be created at about 15,000 feet AGL. It is the Tribe's belief that the need for a 10,000 foot buffer below 15,000 feet AGL is never adequately explained. This is especially true in light of repeated statements by the Air Force at town meetings that as the jets intercept and start turning and diving their speed drops off rapidly, thereby giving the impression that once the supersonic effects are felt at 15,000 feet AGL, and the planes descend toward 5,000 feet AGL, sonic booms will not be created. Is this correct or not?

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III. AFFECTED ENVIRONMENT

In regard to Section 3 of the DEIS, the Goshute Tribe believes that the description of the affected environment is fairly accurate. The Tribe is concerned, however, with the fact that at no time prior to the issuance of the DEIS did the Air Force contact the Tribe for any information such as population, economy, culture, land use, etc. Further, the Tribe believes that the failure of the Air Force to involve the Goshute Tribe in the "scoping" aspect of the environmental analysis was in violation of Federal Regulation. See 40 C.F.R. Section 1501.7(a). The Tribe is also concerned that the Air Force, while recognizing that approximately 150 members of the Tribe live on the Reservation, has failed to address what effects will be experienced by those other 200 members of the Goshute Tribe who do not presently live on the Reservation but who call the Reservation their land. Finally, the Goshute Tribe is concerned with the Air Force failure to properly recognize that the main environmental asset of the Goshute Reservation is its beauty and serenity, which serenity will be shattered if the Air Force proposal is approved. The impact of the Air Force proposal on the Goshute's quality of life is never adequately examined.

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IV. ENVIRONMENTAL CONSEQUENCES

With regard to Section 4.1.1. of the DEIS, Air Quality, the Goshute Tribe is concerned about the approximately nine hundred tons of pollutants that will be emitted over the Gandy Range Area. As the DEIS recognizes, the airspace over the Goshute Reservation is "better than national standards" and the Goshute Tribe does not see why the Air Force has to lower that air quality

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to meet such standard. Further, in regard to this section, the Goshutes believe that the Air Force should seriously consider a variable minimum altitude for supersonic flight training so that it remains above the areas "mean annual mixing height" at any point in time. That is, that the minimum altitude for supersonic flight be raised during the afternoon so that it is above 8,000 feet AGL.

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Turning to the main Environmental Impact of the Air Force proposal, noise, the Goshute Tribe firmly believes that the Air Force has not given adequate consideration to the potential adverse effects of continuous sonic boom activity on humans, animals, structures, etc. For example, the Air Force reliance upon the study done over Oklahoma City is completely unfounded. For one thing the Oklahoma City test only involved eight sonic booms per day for a six month period whereas the Air Force proposal would subject the Goshutes to eight to ten sonic booms per hour over a period in excess of six months. In addition, based upon some of the litigation that arose out of Oklahoma City test, the aircraft flying at that time were at altitudes of approximately eight miles, a far cry from 5,000 feet AGL. *Bennett v. United States*, 266 F.Supp. 627 (W.D. Okla. 1965). Even the Air Force recognizes that the Tonopah test does not adequately examine the potential effects of a noise exposure that is "too long or repeated too often." DEIS at 40. Further, the Air Force statement that other "tests at lesser overpressure have reported the sonic booms do not cause permanent direct injury to people" immediately raises the question of what non-permanent or indirect injuries have been documented and what are the possibilities of such injuries occurring upon the Goshute Reservation.

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Before commenting further on the impact of noise due to the Air Force proposal, a few comments may be appropriate as to the overpressures which will be produced as a result of the sonic boom effect. One concern the Goshute Tribe has in regard to the overpressure data used in the DEIS is the fear that the studies used to arrive at the figures given are of jets traveling at "steady rectilinear flight." Throughout the DEIS, however, the Air Force has stated that the supersonic airspace is needed to simulate war-type conditions. Consequently, the Goshute Tribe has concerns that any studies based upon steady rectilinear flight are not appropriate for the Gandy Range situation and further study ought to be conducted as to the sonic boom effects of aircraft pursuing "dog fight" flight patterns. The Goshute Tribe would especially be interested in further study being undertaken as to the possibility of "focus" booms being generated when two or more aircraft are intercepting each other or performing other maneuvers similiar to that contemplated for the proposed supersonic airspace. The DEIS states that a focus boom can be two to five times as intense as the nominal overpressure produced by a regular sonic boom, DEIS at 39; and as such, the effects and probabilities of focus booms being caused by simulated wartime training is a subject that must be studied further before the Air Force proposal can even be contemplated as viable.

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Another concern the Tribe has, in regard to the overpressures resulting from sonic boom activity, is the statement on page 40 of the DEIS that "tests conducted in both the United States and in Canada have demonstrated that a 4 psf sonic boom is considered annoying to most people." The Air Force admits that at 5,000 feet AGL a F-16 traveling at Mach 1.1 would create an overpressure of 6.36 psf. Further, at Mach 1.3 the overpressure will be 7.48

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psf. While the Goshute Tribe does not doubt the Air Force belief that "overpressures ranging from 50 psf to 144 psf do not cause injury to people," DEIS at 39, the Tribe does not believe the studies are relevant to the present proposal which is more akin to the "water torture" technique than a plunge in a lake.

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Returning to the potential "noise pollution" of the Air Force proposal, the Goshute Tribe is concerned with a number of items. First, the Tribe is concerned that the Air Force averages the noise level over a 24-hour period when, in fact, the flight day will be a period of shorter duration. For example, the Tribe believes it is deceiving to state that the C-weighted day-night average sound level for the north and middle ellipses will be 59.8 decibles, a level where about 12% of the population will be highly annoyed, when in reality the sound level will be much higher for the flight day. How many people will be highly annoyed at the sound levels expected when the level is not averaged over a 24-hour period but is instead averaged over, say, an 8-hour period? (The Goshute has some indication of what the sound level will be like from the DEIS appendix at B-26 that states that at 15,000 feet AGL an F-16 traveling at mach 1.1 will produce a decible level of 109.2.) The Goshute's second concern with the "noise pollution" produced is that the Air Force continues to use the Department of Housing and Urban Development determination that a day-night average sound level below 65 decibles is acceptable for residental purposes when, it is the Goshute belief, the Environmental Protection Agency determination of 55 decibles should be used. The Goshute's third concern is that even when using the Air Force's 24-hour average sound level technique, the level of sound approved by HUD will be

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violated by at least 5 to 7 decibles when the F-16 is traveling at 5,000 feet AGL at mach 1.3. The Air Force would seek to downplay this result by stating that "this scenario is unrealistically exaggerated," but if it is so unrealistic why cannot the Air Force agree to a raising of the minimum altitude at which the supersonic flight will occur? The Goshute's fourth concern with the noise pollution is the statement at page 45 of the DEIS that "some experiments have shown a tendency for sonic boom exposure to degrade the performance of certain visual, steering, and tracking tasks." What were those experiments and the results? The Goshute's fifth concern is that the DEIS is completely silent as to the affect of sonic boom activity on children and especially upon the children participating in the public school at Ibapah, Utah. Finally, the Goshute Tribe desires to express its belief that the inhabitants of this "sparsely populated" land are less tolerant of sonic booms than their neighbors in the metropolitan areas. While the so called city dweller may have consented to have his ears assailed by unnatural noise, the Goshute people treasure and prize the peace and quiet of their reservation. Consequently, they will be less tolerant of the sonic booms and this should be given due consideration by the Air Force.

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Regarding Section 4.1.2.2.2. of the DEIS, Sonic Boom Effects on Animals, the Goshute Tribe wishes to express its concern that the Air Force not ignore the need for more studies in this area. The Air Force admits that "questions on long term protracted exposure and sublevel responses remain to be studied." As for the effects on domestic animals, the Goshute Tribe believes that the limited studies of the nature relied upon by the Air Force are totally inadequate and further study needs to be undertaken. In this regard,

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69 Cont. a question that needs to be addressed and answered by the Air Force is what further study will take place and who will pay for such study? 69 Cont.

Regarding Section 4.1.2.2.3, Sonic Booms Effects on Structures, the Goshute Tribe believes that the Air Force has not taken into proper consideration the effects of sonic booms on structures similar to that upon the Goshute Reservation. Similarly, the Air Force has failed to consider the effects of broken glass, i.e., windows, on the Goshute people during times of winter when, due to limited phone lines, it may be some time before the Air Force could replace such windows. 7 7

Regarding the effects of sonic booms on terrain and seismic activity, Section 4.1.2.2.4, the Goshute Tribe desires to express its concern that further study ought to be undertaken before such risks are incurred. In this regard, the fact that avalanches did not occur as a result of the Air Force test set forth on pages 49-50 of the DEIS does not mean that it is a danger that can be ignored. 4, 69 4,69

Regarding Section 4.1.2.2.5, Sonic Boom Calculations, the Goshute's only comment is that the section implies that the impact figures used throughout the DEIS are based upon aircraft "in level flight or in moderate climbing or descending flight paths." As earlier noted, the Goshute Tribe does not believe this is an accurate reflection of simulated combat training and further study needs to be undertaken. 47 47

Regarding Section 4.1.5, Impact on Air Traffic, the Goshute Tribe feels that the United States Air Force has failed to meet its responsibility under the environmental laws and as an agency of the United States Government by failure to note in the DEIS the possibility of potential action by 70 70

70 Cont.

the Federal Aviation Administration to make the airspace over the Goshute Reservation restricted. As noted by the Air Force at the meeting of the Utah Air Travel Commission on December 7, 1983, it was the Air Force who suggested the change of airspace to a restricted status, though the FAA had been the agency to initially raise the possibility of reclassifying the airspace over portions of the UTTR. Even if the airspace is not reclassified as restricted, however, the Goshute Tribe desires to express its concern that the Air Force has failed to take into consideration the airstrip located just south of Ibapah by the Tribal Hall. This airstrip is a vital link to the reservation for proper medical care and transportation.

With regard to the remaining of the DEIS the Goshute Tribe expresses the following comments: First, while the Goshute Tribe does not desire to see any accidents occur involving F-16 aircraft, experience has taught that such accidents do occur and the Goshute Tribe is concerned with the potential increase in accidents with the expansion of air-to-air sorties over the Gandy Range Area. Second, the Goshute Tribe does not believe the Air Force is correct when it states on page 55 of the DEIS that there "is no clear cut environmental advantage (less populace areas) to the alternate sites within the UTTR and in most cases, they involve operational disadvantages." As noted earlier in these comments, the Goshute Tribe believes that the Air Force has been unduly restrictive in its analysis in failing to reexamin the existing boundaries of the MOA's and Restricted Airspace that make up the UTTR. Third, the Goshute Tribe questions the 1980 study enumerated in Section 4.4. of the DEIS. This study, which concluded that there would be no adverse effects on land values and recreational opportunities under the proposed

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71 Cont.

supersonic flight area was undertaken by a contractor working for the Air Force who was probably desirous of obtaining results favorable to his employer. In addition, without further information as to the level of supersonic flight in the studied MOA's it is questionable if the study has any validity for the present proposal. The Goshute Tribe also resents the statement at page 61 of the DEIS that there "appears to be little indication that there are any significant plans for the future development of the land area beneath the proposed airspace." The Business Council of the Confederated Tribes of the Goshute Reservation has always been interested in the future development of the reservation and affirmatively states that if the Air Force had followed the proper federal regulations and had involved the Goshute Tribe in the "scoping process" the statement would not have been made within the DEIS. Finally, the Goshute Tribe would like to express its concern with the Air Force's failure to analyze their proposal in the light of Goshute culture and belief. Unlike the Anglo community, which is a relative newcomer to the area, the Goshutes have possessed the land from time immemorial and as a sovereign people resent the encroachment upon their land and their airspace by the Air Force.

71 Cont.

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RESOLUTION OF THE BUSINESS COUNCIL
OF THE
CONFEDERATED TRIBES OF THE GOSHUTE RESERVATION

BE IT RESOLVED by the Business Council of the Confederated Tribes of the Goshute Reservation that:

WHEREAS, The Confederated Tribes of the Goshute Reservation is organized under the provisions of the Indian Reorganization Act of June 18, 1934, to promote the common welfare of the members of the tribes and in order to preserve the advantages of self-government, and

WHEREAS, The Goshute Business Council is the governing body of the Confederated Tribes of the Goshute Reservation, and

WHEREAS, The United States Air Force has proposed to include the Goshute Reservation within a Supersonic Flight Operations Area, and

73 WHEREAS, The Air Force has admitted that if its proposal is adopted between 100 to 125 sonic booms will be generated in a flying day and that a sonic boom could hit the ground approximately every 13 minutes, and 73

74 WHEREAS, It appears that the Air Force estimates are conservative and that the number of sonic booms generated may be greater than that estimated, and 74

75 WHEREAS, Medical evidence exists that support the theory that sonic booms can cause physical and psychological harm to humans, and 75

WHEREAS, Sonic booms are known to cause property damage, and

76 WHEREAS, The adoption of the Air Force proposal will destroy the beautiful and serene environment of the Goshute Reservation, and 76

33 WHEREAS, The adoption of the Air Force proposal would cause a major diminution in the value of the Goshute Reservation, and 33

75, 76 WHEREAS, A continuing bombardment of sonic booms on the reservation will have an adverse effect on the children of the Confederated Tribes and will interfere with their schooling, and 75, 76

77 WHEREAS, The Draft Environmental Impact Statement is inadequate in a number of respects and deceiving in other respects, and 77

78 WHEREAS, The past harassing behavior of Air Force pilots has demonstrated that they will not observe altitude restrictions, and 78

WHEREAS, The proposed action, if approved, would greatly affect the limited access now existing for aviation to and from the reservation, and

WHEREAS, Other viable alternatives are available to the Air Force to accomplish its mission without interfering with the rights of the Goshute people, and

WHEREAS, The Confederated Tribes of the Goshute Reservation has never surrendered its sovereign power over the airspace above the reservation and has received no compensation therefor, and

WHEREAS, The Confederated Tribes of the Goshute Reservation has never consented to the use of its air space by the Air Force.

NOW THEREFORE BE IT RESOLVED that the Confederated Tribes of the Goshute Reservation is officially opposed to the Air Force proposal to include the Goshute Reservation within a Supersonic Flight Area, and

BE IT FURTHER RESOLVED that the Goshute Business Council hereby authorizes the Chairman of the Business Council to actively represent the Tribe in joining other groups or individuals in protest of the proposed Air Force action and to take whatever action is necessary including but not limited to, the directing of tribal counsel to oppose the proposed action.

CERTIFICATION

It is hereby certified that the foregoing resolution of the Goshute Business Council of the Confederated Tribes of the Goshute Reservation composed of five members, of whom 4 constituting a quorum were present at a meeting held on the 29th day of November, 1983 and that the foregoing RESOLUTION, was adopted by the affirmative vote of 4 for and 0 against, pursuant to the authority contained in the Constitution and By-Laws of the Confederated Tribes of The Goshute Reservation.

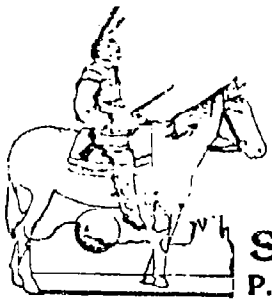
Council Secretary
CONFEDERATE TRIBES OF THE GOSHUTE RESERVATION

Sonic Boom 1983

The Indian People hold a deep reverence for all that surrounds them, and living in balance with nature is a part of this.
We try not to interfere with the natural way of life, or with the lives of others, as the Sonic Boom is doing to us.
There is no noise that compares with that of the Sonic Boom, only that of the Rolling Thunder, which we know comes with the rain. This we know brings us something to help nature, where the Sonic Boom brings us nothing. Our living depends upon the deer and rabbit we take for food, as we have done in the traditional past. The noise of the Sonic Boom frightens them, as it does every living thing.
The Sonic Boom is interfering with those that are yet unborn, the education of our children, the young and old people, those who fly in and out to help us, and at last the animals and birds who has a right to live peacefully, although they have no voice you seem to think.
The Goshute Indians are a Sovereign Nation, they have a right to protest this proposal, as a individual, and together as a tribe, each living in balance with all that surrounds them.
Truly, the Sonic Boom is not in balance with nature.

Written by Vyrie H. Murphy, December 9th, 1983

Vyrie H. Murphy



Shoshone Joint Housing Authority
P.O. Box 1199 - Ely, Nevada 89301 - Telephone (702) 289-2319

DEC 1983
RECEIVED
COCHITE
BOARD OF COUNCIL
BOARDS, UT.

Copy
12-9-83

December 1, 1983

HeadQuarters
AFLC-DEPV
Wright Patterson,
Air Force Base, Ohio
45433

Dear Sirs;

80 The Shoshone Joint Housing Authority in conjunction with our six Board of Commissioners hereby submit our opposition to the Air Force's plan to extend its supersonic flight airspace over the Nevada/Utah border. This would adversely affect our development of 14 units of housing to be built on the Goshute Indian Reservation in the Spring of 84. The homes to be built at Goshute will be pre-fab modular homes. The units will be brought to Goshute in two halves and assembled at the sites. The sonic booms from a jet flying at 5,000 feet could be harmful to the homes and the foundations of concrete that easily crack when it is fresh, or old. 80

33 The Goshutes Reservation will be swallowed up by the supersonic flight airspace proposed by the Air Force. The Goshute Indians have limited industry now, and will have an even harder time attracting new industry with up to "38 sonic-booms" per day. These booms will also have an adverse effect on their livestock, and hamper their limited means of providing for their own families and elderly tribal members. 33

We ask you to reconsider the plight of the Goshute Indians without having to deal with sonic booms approximately three to four times per hour, and relocate your airspace to an unpopulated area.

Your consideration and cooperation in this matter will truly be appreciated !

Sincerely,

Rick Trevena

Rick Trevena, Director

D-100

cc: Board of Commissioners
Senator Laxalt

Comments on the Draft Environmental Impact Statement (DEIS) on the Establishment of the Cedar Range Extension and Adjacent Restric Airspace as an area for Supersonic Flight Training.

Submitted by: Rao and Phyllis Bateman
Kyle and Ranae Bateman
The Parrish Ranch
For presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah
29 Nov 1983

INITIAL STATEMENT: We, the above named ranch owners and Ibapah (Deep Creek Valley) residents of long standing want it known we strongly and absolutely oppose the Air Force proposal to increase restricted airspace along the Utah-Nevada border for supersonic flights and training space for F-16 fighter planes of the 388th Tactical Fighter Wing of Hill Air Force Base and other supersonic jets. The airspace being sought for expansion of supersonic flight and air-to-air combat training overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada This completely takes in the Ibapah ranching district, its grazing properties, the Goshute Indian Reservation, and the proposed Deep Creek Mountain wilderness area. Our ranches and other properties in the Ibapah Valley are included in the proposed restricted area along with twenty-five neighboring ranches and atleast twenty additional homes.

POPULATION OF IBAPAH: Within the boundaries of Ibapah we have 200 people living in close proximity and a total of 350 people living within the proposed area. The Draft Environmental Impact
1 Statement (DEIS) fails to recognize that the people of Ibapah live in a closely populated area, not sparsely settled as stated We need to be recognized and taken into consideration on this proposal as we are the ones who will be adversely affected.

THE SAFETY AND WELFARE: of the people of Ibapah has been of little concern to the military. We are law abiding citizens of these Our United States and we demand consideration. The Air Force has little respect for established boundaries and little concern for Ibapah residents. Low flying jets are hazardous and sonic booms do destroy. Low flying jets means when you can hear the metal clang above the jets roar, see the flash of identification numbers beneath the plane, see the tree tops above the low flying jet, hear the loud roar right above you as you drive your automoblie down the road and you automatically duck or sometimes run out of the road, practically fall off your tractor or horse as they fly directly above you, or fly just above you over the brink of a hill, etc. The fighter pilots seem to use our ranch houses and buildings, the valley residents themselves, and our livestock for experimental runs of realistic gunnery practice and supersonic attacks. Instead of being "shell shocked", we will be "jet shocked" from intensified jet action.

THE NOISE AS WELL AS THE CONCUSSION: of the super sonic booms will annoy area people about 100% rather than the statement of the DEIS that only 12% of the people living in the area would be "highly annoyed." All the Ibapah residents are strongly against this proposal as we have already experienced damaging and explosive sonic booms and frightening roars of unexpected, low flying jets. In the hands of youthful pilots these jets are an instrument of scare and frightening tactics for the purpose of amusement in their behalf because of our startled reactions. With the intensifying of training flights and the predicted 1050 monthly sonic booms from F-16 Fighter wartime tactics, we will be blasted out of existence. If noise from low flying jets and sonic booms are not detrimental, why do babies cringe and cling to their mothers at the sound of a jet? Why do unborn babies quiver and jump within the mother at jet approach? Why do people jump and watch in angered anticipation as they watch for the jets return or the second jet? Why do grazing cattle stampede to the closest fence at the noise of a sonic boom? Human and animals alike become unnerved and can no longer function properly because of the loud, booming concussion of the unexpected sonic boom or the roar of a low flying jet. No, we can never adjust to the noise of the sonic booms or the low flying jets.

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PROPERTY DAMAGE: already has been experienced by valley residents with broken windows, cracked walls of homes and buildings including those of the school house, broken and falling tile and plaster, walls crumbling and foundations cracked. With these unstable conditions the value of our properties will drop to nothing. With this airspace expansion the high density of aircraft that will be operating over this populated area puts our lives, our livelihood, and value of our properties in jeopardy.

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IN CONCLUSION: we have shown some of the adverse effects this proposed training area would have on all Ibapah residents: the ranchers and their families, the Goshute Indians, our livestock and our homes. Our valley will no longer be a "valley of production" but a "valley of destruction", if this proposal takes effect.

RECOMMENDATION: to have the Air Force review their plan for the restricted training and withdraw their request for the proposed training area. The military should consider alternatives to the proposed action rather then subject people of the Deep Creek Valley, their properties of the Deep Creek Mountain area, and the bordering Nevada west hills to the devastating effect of air-to-air supersonic combat training by the Hill Air Force Base F-16 fighter planes.

34

Raw H. Bateman
Phyllis R. Parrish Bateman
Lyle W. Bateman
Renae T. Bateman

D-102

Ibapah, Utah
December 8, 1983

Most Honorable Governor Scott Matheson
Utah State Capital Building
Salt Lake City, Utah

Dear Governor Matheson:

We recently attended the hearing on November 29, 1983 at the Goshute Tribal Center at Ibapah, Utah held by Hill Air Force Base concerning the proposed supersonic expansion area over the Utah/Nevada border. We expressed our opposition there and remain very much opposed to the proposed expansion and lowering of super sonic flight altitudes for the military training in our area. Lawyer, John Paul Kennedy, representing the Goshute Indian tribe asked for the raising of hands of those opposing the super sonic booms along with the airspace expansion proposal for the use of the F-16 super sonic fighter planes. Opposition shown was unanimous and no hands were raised in favor or undecided pertaining to this issue. As (Deep Creek) Ibapah Valley residents, numbering about 200, we discussed and made statements against this proposal and feel this should be brought to your attention. Hill Air Force Base taped all the comments given at the November 29th hearing to be used in the Environmental Impact Statement.

We feel the education of our children will be limited and interrupted as super sonic booms and low flights occur with resultant loss of power of concentration during study. It was pointed out that training flights will occur during school hours. Our brick school building already has had plaster fall from between the bricks, cracked walls, and ceiling tile knocked to the floor all because of sonic booms. The school house has sixteen 4'X4' windows with smaller ones between with our twenty-two school children seated beneath them as they study when school is in session. It would take only one low sonic boom from a jet traveling from North to South to shatter the windows, covering the children with glass and, who knows, the resultant injuries that could occur, possibly even death.

The Air Force plans to fly up to 1,050 supersonic missions per month in the airspace under consideration producing 100 to 125 sonic booms per day. Only 30 percent of these 100 to 125 sonic booms supposedly will reach the ground, but realistically, the pilots do not stay within their limits and many more than stated will be experienced. The proposed low of 5000 feet above ground level has already been exceeded with flight at much less with resultant damage experienced by ranchers and home owners with their windows being broken, walls moved, falling wall articles, wall cracks, foundation cracks and other structural damage besides being frightened beyond measure.

The bus driver has been closely "buzzed" and startled by low flying jets, in all probability losing control for atleast an instant, jeopardizing his life along with the twenty students riding the bus whose lives he is responsible for. The lives of the children and the

driver are endangered as the military plays their games using them as a target. Why are our lives and welfare so meaningless to the military? Who guarantees that the jets will stay 5000 feet above
3 ground level? Lawyer John Paul Kennedy asked the Air Force for a sonic boom demonstration at 5000feet above ground level to take place during the hearing at the Goshute Tribal Center November 29th above the Goshute Tribal Center. The military declined the request of a sonic boom at 5000 feet, but gave it at 15,000 feet--why? Even at 15,000 feet the sonic boom knocked one fluorescent light to the floor and glass fell out of a window in the room where the hearing was taking place, at the Goshute Tribal Center.

Why do we as free Americans and residents of Utah have to be subjected to the slow deterioration of our homes, our health and other hazardous effects of these subsonic and supersonic jets? Some of our homes which are from 100 years old to some comparatively new will not withstand the 100 to 125 sonic booms per day any better than human beings and animals can. There is no way we can get used to these sonic booms. Who will rectify for the damage suffered by our
3 2four residents who have sevier heart problems, together with the elderly and children whom we feel suffer considerably because of the sonic booms and low flying jets?

We live in this peaceful valley (before the jets) and love it just as it is, as the generations before us have. Some ranches and farms now have the fifth family generations being raised on them and the Goshute Reservation has longer lineage than that. We feel our lives and livelihood are at stake and do not want to have to abandon our homes and ranches. Devaluation of our land would surely occur if this proposal is adopted.

We invite you to personally experience a low sonic boom of atleast 5000 feet above ground level by these F-16 fighter planes and determine if you would permit this to happen over your home and family.

Rao Bateman of this letter is an honorably discharged veteran of World War II as well as the rest of us being upright and patriotic citizens. Out concern is that our lives and our properties cannot withstand this proposed expansion of Airspace nor the proposed intensifying of military fighter wartime tactics by F-16 and other jets.

We feel that the already established testing areas should be used by the supersonic F-16 jets or they must use totally unpopulated areas such as the Utah Salt Flats.

We have attached part of our comments we made at the November 29th hearing at Ibapah.

Thank you very much for your attention and consideration on this matter.

Sincerely,

Rao N. Bateman
Phyllis P. Bateman
Kyle N. Bateman
Ranae V. Bateman

Rao and Phyllis Bateman
Kyle and Ranae Bateman
The Parrish Ranch

JOHN PAUL KENNEDY
GEORGE J. ROMNEY
SCOTT C. PUGSLEY
MARK H. ANDERSON
GEORGE RICHARD HILL
RICHARD M. HYMAS
CLARK B. FETZER
KAREN S. THOMPSON
JOHN N. BREMS
PAUL H. ASHTON
MICHAEL L. DOWDLE
DAVID JAY HOLDSWORTH

OF COUNSEL
JOHN S. BOYDEN, JR.
F. BURTON HOWARD
J. STUART McMASTER

BOYDEN, KENNEDY & ROMNEY
LAW OFFICES
1000 KENNECOTT BUILDING
TEN EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84133
(801) 521-0600

JOHN S. BOYDEN
(1906-1980)

COALVILLE OFFICE
MAIN & CENTER STREETS
COALVILLE, UTAH 84017
(801) 336-2020

January 20, 1984

Mr. Keith Davis
2849 ABG/DEEXX
Hill A.F.B., Utah 84056

Re: Further Comments of the Goshute Tribe to the Draft Environmental Impact Statement Regarding Supersonic Flight Training in the Gandy Range Extension

Dear Keith:

Pursuant to our conversation of January 18, 1984, the following are additional comments of the Confederated Tribes of the Goshute Reservation to the Draft Environmental Impact Statement regarding the Gandy Range. Since the Tribe is interested in hearing the Air Force's response to the Papago situation, we are asking that you respond to these additional comments at the same time as you respond to the Tribe's original comments.

COMMENTS

It has come to the attention of the Confederated Tribes of the Goshute Reservation that the Papago Tribe in Arizona has had some negative experiences with the Air Force in regard to sonic boom promulgation over their reservation. Specifically, the Goshute Tribe has read in the B.I.A. Tribal Newsletter, dated December 29, 1983, Vol. 7, No. 14, that the Vice Chairman of the Papago Tribe, Mr. Francisco Jose, Jr., believes that the Air Force is "guilty of repeated violations of rules governing the Sells Military Operating Area in south-central Arizona." When Mr. Jose was contacted by the Goshute Tribal attorney on January 18, 1984, he explained that because of the negative

impacts of sonic boom promulation over the Papago reservation the Papago Tribal Council had passed a resolution seeking a stop to supersonic flights over the reservation. The Papago Vice Chairman went on to note a number of problems that the Tribe has experienced with the Air Force. Those problems include the failure of Air Force pilots to stay above minimum altitude restrictions, evidenced by an incident of three planes flying at 100 feet above a Papago village on December 10, 1983, in which severe structural damage was caused as a result of sonic boom promulgation, and the difficulty the Papago Tribe has had in obtaining any reimbursement for damages in excess of $500.00, the limit placed on the local Air Force office to dispurse without litigation.

81 The Goshute Tribe is concerned that if the Air Force approves the proposal to conduct supersonic flights above the Goshute Reservation they will experience many of the same problems as the Papago Indian Tribe. The Goshute Tribe would appreciate it if the Air Force could give its side of the story to the Papago situation and could set forth the steps it would take to assure that the same instances of pilot abuse and reimbursement difficulties would not be experienced by the Goshutes should supersonic flight be approved above the Goshute Reservation. 81

Thank you for your consideration in this matter.

Sincerely,

BOYDEN, KENNEDY & ROMNEY

By _____
John Paul Kennedy

By _____
Paul H. Ashton

JPK/brz
cc: Chester Steele, Chairman

[illegible]

Oct. 10, 1983

[illegible]

[illegible]

Dear Mr. Buffington:

Today I learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I pay a great deal of attention to the newspapers and other media in this area, and I don't recall reading or hearing about this proposal, or any type of public comment period before today.

5 Therefore, on the behalf of myself and others who may be similarly in need of further information, I am requesting that the Air Force extend its comment period from Oct. 14 to Dec. 14. 5

As far as the tenth of October, I have only four days under the current comment period to study the Air Force proposal and look for my opinions on this important issue. I feel this is very unfair, and that the Air Force did not properly inform Nevadans of it's intentions and of their rights.

I am sending copies of this letter to my Congressional representatives, Governor Bryan of Nevada and to the Public Affairs Office in Utah. I urge you to extend the public comment period, as the current time alloted is simply insufficient and disrespectful of the citizens of Nevada.

Sincerely,

Jacquie Buffington

Jacquie Buffington

Copy to Rep. Reid,

27491

ENVIRONMENTAL PLANNING
HQ AFLC/DEPV,
WRIGHT-PATTERSON AFB
OH 45433

Oct. 10, 1983

JACQUIE BUFFINGTON
P.O. Box 13645
Reno, NV 89507

Today I learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I pay a great deal of attention to the newspapers and other media in this area, and I don't recall reading or hearing about this proposal, or any type of public comment period before today.

Therefore, on the behalf of myself and others who may be similarly in need of further information, I am requesting that the Air Force extend its comment period from Oct. 14 to Dec. 14.

As today is the tenth of October, I have only four days under the current comment period to study the Air Force proposal and to voice my opinions on this important issue. I feel this is very unfair, and that the Air Force is simply trying to inform Nevadans of it's intentions and of their rights.

I am sending copies of this letter to my Congressional representatives, Governor Bryan of Nevada and to the Public Affairs Office in Utah. I urge you to extend the public comment period, as the current time alloted is simply insufficient and disrespectful of the citizens of Nevada.

Sincerely,

Jacquie Buffington

Jacquie Buffington

Dear Rep. Reid, This matter as it holds important implications for Nevada. Please try to get an extension of the public comment period. Thanks!

Jacquie Buffington

D-109

TO: ENVIRONMENTAL PLANNING, HQ AFLC/DEPV, WRIGHT-PATTERSON AFB, OH 45433 DATE 10/6/93

FROM: Josephine Calvin, Box 925 - Lovelock, NV. 89419 (Name, address)

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec. 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

6

Josephine Calvin CH.P
Signature

CHILTON ENGINEERING, Chartered

October 20, 1983

The Honorable Harry Reid
1171 Longworth Senate Office Bldg.
Washington, D.C. 20510

Dear Senator Reid:

I wish to comment on the Air Force proposal to increase the Military Operation Areas within the State of Nevada.

From a commercial aviation standpoint, an MOA, even though not a restricted area, serves as an obstacle which must be detoured when flying under instrument flight rules. Air traffic control will not accept IFR flight plans that penetrate MOA's and require extensive detouring because they cannot maintain aircraft separation as required by the FAR's since they do not have control over military aircraft.

At the present time, it is impossible for a direct flight from Elko to Las Vegas while flying on an instrument flight plan without detouring easterly to Beryl Intersection (near Cedar City, Utah) or detouring through Tonopah, due to the combination of the restricted area in the Atomic Energy Commission's testing area near Beatty and the desert military operation area (MOA) east of said restricted area. The detour in either case requires some 50 to 70 additional air miles of travel which are both time consuming and expensive.

Our firm has offices in Elko, Reno and Las Vegas and depend upon company owned aircraft to transport personnel and to serve our clients, which are located throughout the State of Nevada. The additional MOA's now being proposed by the Air Force in eastern, western, and central Nevada would have a definite adverse economic effect as well as an adverse effect on the safety of our flight operations. 82 82

We are certainly sympathetic to the needs of military training and additional build-up of our forces, however, I believe an assessment of the actual needs and the joint use of the now established restricted areas and MOA's should be carried out.

We would appreciate anything you can do in this regard.

Yours truly,

CHILTON ENGINEERING CHT'D.

Mark Chilton, P.E.

MC:lb

D-111

421 COURT ELKO, NEVADA 89801 AREA 702 • 738-2121

Citizen Alert

AN INDEPENDENT INFORMATION SOURCE FOR NEVADANS

P.O. Box 1681
Las Vegas, Nevada 89101
702/382-5077

P.O. Box 5391
Reno, Nevada 89513
702/786-4220

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MARLA PAINTER
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BILL VINCENT
Las Vegas Office

P. O. Box 5391
Reno, NV 89513

October 5, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Environmental Planners:

Citizen Alert is a statewide, public education and citizen action organization concerned with a veriety of issues, including the management of the public lands. It was with great surprise that we learned yesterday of the Air Force's plan to create a supersonic operations area in eastern Nevada. We were shocked to learn that a Draft Environmental Impact Statement (DEIS) had been prepared, and that the comment period is scheduled to expire October 14th.

Along with other organizations and individuals, we would like the opportunity to comment on the DEIS, and to participate in public hearings on the proposal.

Therefore, we are writing to formally request that the public comment period be extended, preferably for sixty days, to allow full public participation in this very significant proposal. In addition, we would also like to request public hearings in Nevada and Utah, so that local residents can have the opportunity to comment on the proposal. 5 6

Thank you for your timely consideration of these requests. We look forward to hearing from you soon.

Sincerely,

Abby Johnson

Abby Johnson
Executive Director

Subject: DEIS, Establishment of the Gandy Range Extension and Adjacent restricted airspace as an area for supersonic flight training, Hill AFB, Utah.

D-112

Electro Audit
DATE 18 Oct 83 TIME 1:11

rcvd 14 Nov 83

Citizen Alert

AN ALTERNATIVE INFORMATION SOURCE FOR NEVADANS

P.O. Box 1681
Las Vegas, Nevada 89101

P.O. Box 5391
Reno, Nevada 89513

Nov. 8, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB
Ohio 45433

Dear Sirs:

A study of the Draft EIS for the Gandy Range Extension and adjacent restricted airspace as an area for supersonic flight training raises serious questions as to the adequacy of the impact analysis.

83 It is our conclusion that only superficial consideration has been given to the adverse effects the supersonic flights and the restrictions on the airspace will have on the inhabitants, the economy, the wildlife and the environment in the area and adjacent to it. 83

We also have concern about the risk to pilots and planes. The Draft EIS says (p. 32) "sightings of numerous raptors and other avian species have been documented, including observations of high densities of golden eagles year-round."

The BLM's Draft Wells Resource Management Plan and EIS states: "Of major significance is a raptor observation and trapping area located atop the ridgeline in the (Goshute Peak) WSA. At the site over the past four years about 5,000 to 6,000 raptors, including goshawks and bald eagles, have been observed migrating south each fall."

84 With the number of sorties projected at from 719 to 1169 a month in the presence of so many large birds the possibility of an F-16 becoming a casualty would seem to be unacceptably high. There are desert areas in this region where pilots and their $16 million planes could operate relatively free of this hazard. 84

Serious losses as well as adverse impacts also are anticipated on the ground.

6,32 70,80 White Pine County Commissioners and residents, and ranchers and townspeople in Utah have expressed concern about the effects of 6,32 70,80

(more)

D-113

Full citizen participation for democratic decisions on issues that affect our lives. Nonprofit -- tax exempt.

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ont.

supersonic flights on public health and the economy. Airspace restrictions will pose serious problems to the commercial airline serving Ely, to ranchers and other private pilots and to emergency medical flights.

6, 32, 70, 80 Cont.

31, 36
0, 85

No adequate studies have been made of the psychological and physiological consequences of continuous sonic booms. They would be very disruptive to the peace of mind and tranquility of the Goshute Indians whose reservation would be completely blanketed by the proposed SOA.

6, 31, 36 40, 8.

86

The EIS takes into account few environmental factors. There is no mention made of Wilderness Study Areas although one, the Goshute Peak WSA, is inside the borders of the SOA, and three others are immediately adjacent. Goshute has been recommended for inclusion in the National Wilderness Preservation System, and bighorn sheep plants are planned on Mt. Moriah. Sonic booms could severly stress the animals. Even booms which may not reach low elevations because of the bending upward by the temperature gradient would impact on the higher elevation of Mt. Moriah where the sheep would be.

86

We believe the questions raised above deserve thoughtful consideration and public hearings should be adequate to provide a forum for the expressions of these concerns.

Sincerely,

Bill Vincent

Bill Vincent
Southern Coordinator

CITIZENS CALL

126 So. 1400 W. • Cedar City, Utah 84720 • (801) 586-6674

From: Janet C. Gordon, *Director*

Date: October 13, 1983

To: Environmental Planning, HQ AFLC/DEPV, Wright PattersonAFB

Re: Proposed supersonic operations area in Eastern Nevada

5 We have just this week learned of the proposal to turn the Eastern part of Nevada into a supersonic operations area. We request a 60-day extension for the comment period (reported to end October 14!) from October 14 to December 14. 5

We would also like to formally request that the Air Force hold public hearings on the proposal in Nevada and Utah.

Thank you

Janet C. Gordon

P.S. Would you please send a copy of the DEIS?

November 21, 1983

Dear Environmental Planning,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Lynette Cruz

D-116

1

TO: ENVIRONMENTAL PLANNING, HQ AFLC/DEPV WRIGHT-PATTERSON AFB, OH 45433 DATE Oct 13, 1983

FROM: George Douglass Callao RT. Box 380 Wendover UT (Name, address) 84083

5 I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec. 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely, 5

George Douglass
Signature

December 16, 1983

George Douglass
Gailao Star Route
Ibapah, Utah 84083

Environmental Planning
HQAFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sir:

4 In considering the alternatives to this draft EIS, I strongly recommend alternative a. No action, for the reasons that: 4

Those of us who live in this area are already subjected to enough harassment and inconvenience by the Air Force.

The main inconvenience is that we cannot, except at very limited times fly into or out of the area in private planes.

We are constantly harassed by low level flights, which can be extremely frightening at times and are always extremely annoying. These flights upset, and sometimes stampede our livestock.

We have to put up with cruise missiles crashing near our fields and where we are working, and it's anyone's guess when one of those F-16's is going to crash in our yard, and possibly kill one of us.

This past summer, three of our neighbors in Gold Hill on different occasions had windows broken and things knocked off shelves in separate incidents of sonic booms, so we already have our share of them.

Sincerely,

George Douglass

George Douglass

December 11, 1983
SR 1 Box 42
Ely, Nevada 89301

Environmental Planning,
HQ AFLC/DEPV,
Wright -Patterson AFB, OH 45433

Ladies and Gentlemen of the Air Force:

I offer the following comments in addition to those I submitted at the Ely, Nevada hearing concerning supersonic testing in the Gandy Range MOA. I would appreciate your including them in the record.

52 I understand that there presently exists a mix of supersonic and subsonic activity within the UTTR supersonic training area, the subsonic being primarily air-to-ground practice. Is not another alternative to the expanded supersonic training area one by which the ground targets would be moved outside the present supersonic area, leaving only supersonic activity there, and increasing subsonic training within the other DOD-owned areas, and MOA's if necessary? 52

87 I feel that an increase in subsonic activity would have little, if any, negative impact upon the people or the environment of Western Utah and Eastern Nevada. I also believe that the cost of moving the ground targets would be far less than that of another alternative you've identified--that of moving the 388th TFW. I would welcome such an alternative being considered; also, the proposed expansion of the restricted area would enhance the safety of a more-intensive subsonic training program, and would thus be more palatable. 87

I request that you include a discussion of this proposed alternative in your Final EIS; though I know little about your training needs, this alternative seems logical, and a hell of a lot more acceptable, to those of us whom are potentially impacted.

Thanks again for your consideration.

Sincerely,

Brent Eldridge

Brent Eldridge

S. R. 1, Box 39
Ely, Nevada 89301
December 10, 1983

Environmental Planning
HQ AFLC/DEPV
Wright- Patterson AFB, Ohio 45433

Dear Sirs;

I'm writing this statement in regard to the proposed Gandy Supersonic Operations Area. I oppose any further restrictions in the Gandy M.O.A., which will inevitably come if it is made a Supersonic Operations Area.
I think that there is sufficient area for a supersonic area in the southern part of Nevada where there is already restricted airspace large enough to give a pilot more than three minutes training time in one direction through the proposed supersonic area at those speeds.
I think that supersonic booms approximately 14 times per day will drive people and animals within and adjacent to the area "nuts". I believe in having a strong and ready national defense, but I think there is plenty of space already allocated as restricted for practice and training. I'm opposed to any further restrictions within or close to the Gandy M. O. A.

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88

Sincerely,

Dennis H. Eldridge

Dennis H. Eldridge

COMMISSIONERS

WILLIAM B. GIBBS
ERNIE IZZI
RAY E. SMITH

GEORGE R. E. BOUCHER
COUNTY MANAGER
(702) 738-5398

Board of County Commissioners

ELKO COUNTY COURTHOUSE
ELKO, NEVADA 89801

December 7, 1983

Dept. of the Air Force
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio
45433

RE: DEIS on the Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training

Gentlemen:

The Board of County Commissioners responded earlier to the DEIS when the comment period ended October 14, 1983. A copy of the comment letter dated October 11, 1983 is attached with this letter.

Subsequent to the October 14th comment period closure, an extension was granted plus three public hearings. One of the public hearings was held in Elko, Nevada on the evening of December 1, 1983. Commissioner Smith and the County Manager were in attendance at the Elko public hearing.

Several presentations were entered into the record by some of the public hearing attendees whereby the Department of Air Force will need to respond as noted by the conducting officer. It was obvious that some of the presentations were verbatim repeat of what had been submitted at one or both of the other local public hearings.

The Board of County Commissioners for the County of Elko are interested in the Air Force proposal, but are not in opposition for any reason at this time. As of this date, the Board of County Commissioners have not been contacted by any person or entity voicing a concern relating to the DEIS. Therefore, consistent with the October 11, 1983 response, the Board of County Commissioners do not submit an objection or concern to the DEIS. However, if a problem does develop such as within the West Wendover community, the Board reserves the condition to request a consideration to alleviate the problem.

The Board of County Commissioners wish to be kept informed of the progression of the EIS and the final decision relating to the project. Thank you for your consideration and cooperation in this request.

Sincerely yours,

George R.E. Boucher

GEORGE R.E. BOUCHER
Elko County Manager

GREB/lm

COMMISSIONERS

WILLIAM H. GIBBS
ERNIE HALL
ROY E. SMITH

GEORGE R. E. BOUCHER
COUNTY MANAGER
(702) 738-5398

Board of County Commissioners

ELKO COUNTY COURTHOUSE
ELKO, NEVADA 89801

October 11, 1983

State of Nevada
State Office of Community Services
Capitol Complex
Carson City, Nevada
89710

Linda A. Ryan
Director

ATTN: Mr. John B. Walker, Coordinator
State Clearinghouse

RE: DEIS relating to proposed use of air space for supersonic flight training over a portion of Elko County

Dear Mr. Walker:

The Board of County Commissioners have discussed the DEIS during their regular October 5, 1983 meeting. The basic determination for response by the Board was they do not object to the proposed use of airspace involving approximately twenty-two by thirty-four miles in the extreme southeastern corner of Elko County. The understanding by the Board is the use in airspace only and not the ground surface except for sonic boom shockwave affect.

4 The reservation or contingency the Board reserves for consideration is if the sonic boom impact does affect the community of West Wendover, Nevada that necessary measures be taken by the U.S. Air Force to adjust their maneuverpattern to alleviate the annoyance factor. 4

Thank you for contacting Elko County for a response in this matter.

Sincerely yours,

GEORGE R.E. BOUCHER
Elko County Manager

GREB/lm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295

OCT 2 7 1983

8PM-ES

Director, Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Sir:

The Region VIII office of the Environmental Protection Agency has completed its review of the Gandy Range Extension draft Environmental Impact Statement (DEIS). The U.S. Air Force is to be commended for the DEIS's explanation of the causes of "normal" and "worst case" range use, and the presentation of related calculations and assumptions in a clear concise manner.

The attached comments are offered for your consideration in the preparation of the final environmental impact statement. According to the system EPA uses to rate DEIS's, the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training will be assigned a rating of LO-2. This means that although it does not appear that there are significant environmental impacts from the proposed action, we find the informational content and analysis could be strengthened with the additional data suggested. If you have any question regarding our comments, please contact Mike Hammer of my staff at FTS 327-2351.

Sincerely yours,

John G. Welles,
Regional Administrator

Enclosure

Detail Comments

AIR QUALITY

The DEIS states that most flight operations will be conducted above the prevailing morning and afternoon mixing heights. Therefore, there is only a small chance of the exhaust pollutants reaching the surface under the flight operation area. The most probable effects of the NO_x and SO_2 resulting from the flight operations will be as brief and infrequent episodes up to hundreds of miles down wind.

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We would request that the Final EIS address the contribution of NO_x and SO_2, either by dry deposition or washout by rain or snow, to the acid rain accumulation in the high mountains of Eastern Utah and Western Colorado.

NOISE

Although the noise analysis compares the Ldn noise levels resulting from these exercises with the U.S. Department of Housing and Urban Development's upper noise level for determining acceptability of areas for residential land use, the Air Force has not compared those supersonic training noise levels with the present ambient noise levels without military aircraft overflight. Based on population levels in the proposed flight area, the National Academy of Sciences CHABA report predicts ambient sound levels in the Ldn 35-40dB range. With the inception of the supersonic training flights, the DEIS projects a normal Ldn in the range of 58-60dB, which is approximately four times as loud as the existing environment. The worst case Ldn is projected to be in the 70-72dB range, or more than eight times as loud. These extremely large increases over the existing sound levels, coupled with the very high single event noise levels, suggest a need for additional mitigation efforts.

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We fully support the mitigation measures discussed in the DEIS on page 61: minimum altitude of 5,000 feet above ground level, minimum number of weekend/holiday flights, and payment of damage claims filed by area residents. However, we have the following additional comments on mitigation for your consideration. We suggest limiting supersonic training flights in the Gandy and adjacent areas to the hours of 8AM to 7PM, to avoid sleep disturbance and family activity interference impacts for the residents. These hours would allow for nighttime flights in the late fall and winter months, while offering the residents and backcountry users some respite from the sonic booms and accompanying aircraft noise.

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4

In conjunction with the payment of damage claims, we strongly recommend that the procedures for registering noise complaints and damage claims be clearly spelled out to local, tribal, regional and state officials having public health or law enforcement jurisdiction over the affected area. Residents in the area may not know who to call or how to file a complaint or claim, or be aware of the documentation required by the Air Force. We recommend that several workshops or similar briefing sessions be given for these officials, since they are most likely to be the first persons contacted by the public. These officials should have a clear understanding of the purpose and extent of the training missions, the normal and worst case day/night noise levels, and the single event noise levels.

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294

They should know how to assist their constituents in contacting the Air Force, and what information the Air Force will require for their claim forms. If the citizens can get help through their local officials, they may feel less annoyed by the noise from the training operations. Furthermore, based on a more complete complaint history, boundaries of the flight areas can be adjusted to avoid areas where continuing complaints are generated and damage claims paid.

Another mitigation measure would be to soundproof any schools, hospitals churches or public buildings that would be exposed to sonic booms from these training operations. Data on the number of such buildings was not presented in the DEIS, but based on the low population levels of the area, the costs for soundproofing should not be excessive, especially compared with the savings in fuel consumption, travel time, and personnel and aircraft relocation costs which use of the Gandy MOA offers. The energy conservation benefits of soundproofing techniques such as insulation and storm windows could also be presented to local residents at the time the public buildings are retrofitted. 296

295 Our final comment deals with with the proposed Wilderness Study Area called the Deep Creek Mountains and the Snake Mountain Range which may at some point be included in a Great Basin National Park proposal. We share the concerns of the Bureau of Land Management and the State of Nevada, as well as users of these areas, that their natural wilderness characteristics and wildlife populations be protected. The DEIS states that the sonic booms from the proposed training flights will not impact either of these two areas. Because we do not currently have the technical expertise to evaluate this assertion, we cannot comment on its technical accuracy. However, we would strongly recommend a noise monitoring program in each of the areas to accurately assess any noise impacts from both the normal and worst case traffic levels. The data collected could then be evaluated in terms of adverse impacts, and appropriate boundary adjustments of the training area made to avoid noise sensitive area.

120

EskDale
Via Garrison, UT 84728
December 8, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Gentlemen:

As residents of Millard County in western Utah, we wish hereby to protest the intentions of the Air Force to establish a supersonic flight training area a few miles to the north of our community over Gandy and Partoun. We also protest the fact that such short notice and little information were given to the public on this matter.

EskDale, with its 71 residents, is a private, Christian community of the Order of Aaron. Although we have been here 30 years, you will not find us on any maps of the area because of the private nature of our undertaking. Along with our two sister communities of Bethel (five miles south) and Petra (three miles north), we total 103 residents, all members of the same church organization. The livelihood of all 103 residents of these communities is based principally upon our dairy operation located at EskDale.

The noise anticipated from the frequent supersonic booms of your proposed operations, especially the focal booms which carry longer distances, and the noise from the aircraft themselves is bound to have a startling effect on the cattle of our dairy herds. Moreover, the frequent, strong winds, which are so often out of the north here, of course, will, when present, serve to intensify the disturbing effect. Consequently, we may expect a deleterious effect on our milk production. 89

89

Although we have been in operation here for 30 years, we feel that the proximity of your proposed operations is such that it could seriously jeopardize our continued existence as dairy-based communities. We ask, therefore, that you please find a more remote, less populated and less agricultural area over which to utilize the air space for such training. Thank you.

Respectfully,

ESKDALE COMMUNITY COUNCIL

Don R. Hartlauer

Don R. Hartlauer
Secretary

U.S Department
of Transportation

**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

October 17, 1983

Mr. Gary D. Vest
Acting Deputy for Environment and Safety
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Mr. Vest:

We have reviewed the Department of the Air Force Draft Environmental Impact Statement (DEIS) on the "Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training". We compliment your office on the tremendous effort it has put into this DEIS.

The paragraph on "Impact of Air Traffic" under Section IV, Environmental Consequences, raised some questions with our Air Traffic Service; they will contact you directly regarding their concerns.

Thank you for the opportunity to review and comment on this matter.

Sincerely,

John E. Wesler
Director of Environment and Energy

Edward Warren First American Aloft

United States Department of Agriculture
Forest Service
324 25th Street
Ogden, UT 84401

Reply to 1950

Date OCT 26 1983

Mr. James F. Boatright
Environmental Planning
H.Q. AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Mr. Boatright:

We have reviewed the Draft Environmental Impact Statement, "Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training," and find it generally well written.

4, 103 — The coverage of threatened and endangered species is fairly comprehensive, while treatment of terrestrial wildlife is cursory, but adequate. We note no mention/discussion of aquatic resources if they are present. The coverage in 4.1.2.2.2, Sonic Boom Effects on Animals, is very good. — 4, 103

46, 99 — The coverage of low-level Supersonic Flight Impact on Air Traffic (4.1.5) appears to be adequate; however, we have concerns for Forest Service low-level emergency aerial fire reconnaissance and suppression flights in the Mt. Moriah area. These activities need to be closely coordinated to prevent accidents from occuring during fire suppression activities. — 46, 99

46 — The Mt. Moriah area is currently being evaluated for Wilderness. Such a classification would be, in part, dependent upon maintaining opportunities for solitude. Areas of Mt. Moriah may be within the elliptical airspace or inside of the 11-mile cutoff distance. It is difficult for us to judge this from the scale of the maps associated with the document. We would need to know this in order to determine the potential effect of sonic booms on the area's wilderness character. — 46

We appreciate the opportunity to review the Draft EIS. We concur that the Gandy Range extension is a most logical alternative and desire working with the Air Force Command to resolve our concerns.

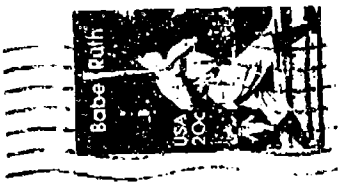
Sincerely,

RICHARD K. GRISWOLD
Director, Planning and Budget

FS-6200 110 (7

From: Bob Fulkerson
215 E 7th St. #6
Reno, NV 89501

10/12/83
RENO, NV 895
PM
11 OCT
1983



To: Environmental Planners,

This is to formally request a 60-day extension in the comment period (Oct 14 to Dec. 14) regarding turning a large part of eastern Nevada into a Supersonic Operations area. I also request the Air Force hold public hearings on the proposal.

Thanks,
Bob Fulkerson

5

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB,
Ohio 45433

5

Oct 19 83
Callao 225
Wendover Ut. 84083

Environmental Planning
HQ/DEPV
Wright - Patterson AFB OH 45433

Dear Sir

Recently I was made aware that the U.S.A.F is planning a supersonic loom path over our part of the County. Surely we are plagued with enough of that noise now.

Please extend the time limit to Dec. 14-83 so that I and my neighbors may respond to the Draft Environmental Impact Statement.

Thank you for your attention to this urgent matter.

Sincerely

Cecil Garlough

5

5

Post Office Box 27
Baker, Nevada 89311
October 12, 1983

Environmental Planning
HQ AFLC/DEPV, Wright-Patterson AFB
Ohio 45433

Gentlemen:

Your proposal to conduct supersonic flight training in the northern border area of Nevada and Utah is a deadly threat to our environment. For instance:

9 1) Small planes, both private and commercial, play a vital role in our local economy. The ability to monitor cattle, sheep and wildlife by plane is extremely important to the larger ranches, as well as to trapping and predator control. In the immediate vicinity of the area affected by this Air Force proposal there are at least twenty families whose livelihoods are built around their ability to get around this region safely by air. And, of course, this air space is used quite regularly to flight-train the younger members of these families. 9

37 2) Regardless of the opinions expressed in your DEIS, the effect of sonic booms on animals, both domestic and wild, is observable and violent. A herd of sheep scatters, a horse bolts. This particular impact requires serious study, not the offhand dismissal rendered in your Draft. 3

90 3) The occasional sonic boom that now breaks the silence here originates, I presume, at around 30,000 feet. It is always shocking, to me and to everyone I know. Presumably, supersonic flights at 5,000 feet would be an even greater assault to us all, animals and humans alike. That is outrageous. Your DEIS disdains the residents of this area, including an entire Indian tribe, by declaring this kind of violence "suitable for residential purposes." No authority is cited for this preposterous notion. 9

5 Aside from these and other gross misconceptions in your DEIS, we deserve to have been notified of the proposal in a timely manner, rather than having to discover it for ourselves only five days before your October 14 deadline. Therefore, we request: 1) an extension of the commentary period to mid-December, and 2) a public hearing to permit an exchange of real information between Air Force representatives and the citizens who are productively using the airspace in question. 1

Yours truly,

Jo Anne Garrett

Jo Anne Garrett

cc: Sen. Laxalt, Sen. Hecht
Gov. Richard Bryan
Rep. B. Vucanovish
Rep. Harry Reid

Representative Harry Reid
U.S. House of Representatives
Washington, D.C.

Re: Goldy Range Extension:
~~Air Superiority Fight~~

Dear Harry Reid,

Herewith is a copy of my letter to the Air Force concerning its DEIS on the above subject.

Please do everything you can to require public hearings in this matter!

Thanks,

Jo Anne Garrett
Box 27, Baker
Nevada 89311

October 14, 1983

MARIE GESICK
860 MARK RD
FALLON, NEVADA 89406
(702) 423-4772

OCTOBER 7, 1983

ATTN: KIETH DAVIS
2849 ABG/DEEXX
HILL AFB, UTAH
84056

DEAR SIR,

I AM WRITING IN RESPONSE TO OUR TELEPHONE CONVERSATION OF 10-6-83. THIS SHALL BE CONSIDERED A WRITEN REQUEST FOR EXTENDING THE COMMENT DATE FOR THE DEIS, CREATING A SUPERSONIC OPERATING AREA, WHICH EXTENDS INTO NEVADA.

AS I EXPLAINED TO YOU, THIS PROPOSAL HAD NOT BEEN PASSED ON TO THE PUBLIC, WITH EXCEPTION TO STATE AND LOCAL AGENCIES. WE HAVE ONLY FOUND OUT ABOUT IT YESTERDAY. DUE TO THIS LACK OF COMMUNICATION BETWEEN AIR FORCE OFFICALS AND THE PUBLIC, (RESIDENTS, AND ORGANIZATIONS) I STRONGLY URGE THE AIR FORCE TO EXTEND THE COMMENT PERIOD FOR 30-45 DAYS FROM THE DATE INITIALLY SET OF 10-14-83. 5

I WOULD ALSO LIKE TO BE PUT ON A MAILING LIST FOR ANY FURTHER PROPOSALS INVOLVING NEVADA LANDS AND AIRSPACE MATTERS. PLEASE SEE THAT I AM KEPT ABREAST OF THIS PROPOSAL AND RECEIVE THE FINAL EIS.

RESPECTFULLY,

Marie L. Glenick

SECRETARY CONCERNED RURAL NEVADANS - FALLON

To Environmental Planning
HQ AFLC/Dep. U
Wright-Patterson AFB
OH 45433

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you very much.

Sincerely
Janet L. Gilbert
6185 Frankstown Rd
Carson City, Nevada
89701

Elizabeth W. Gledhill
5340 GOLDENROD DRIVE • RENO, NEVADA 89511

10/15/83

Dear Sirs,

I recently heard of a proposal to turn part of eastern Nevada into a super-sonic operations area. I am writing to request that the air force hold public hearings on this proposal in Nevada + Utah.

5

5

Sincerely,

Elizabeth Gledhill

Environmental Planning
HC AFLC/DEPV
Wright-Patterson AFB, Ohio 45433
December 6, 1983

Dear Sir,

We live in western Juab County, Utah on Fish Springs Wildlife Refuge and enjoy the tranquility and beauty of this remote area. The remoteness of this part of Utah and eastern Nevada make it a very desirable place for people (even though not high in number) to live and visit for enjoying the naturalness of the Great Basin.

The U.S. Air Force Gandy Range Extension and Adjacent Airspace For Supersonic Flight Training, Eastern Nevada and Western Utah proposal would have an extremely detrimental effect on this area. Nothing is known about the effects of continuous sonic booms on people, domestic animals, wildlife, structures or terrain. Who knowns what the physical and psychological effects of the sonic booms created by jet aircraft in the proposal will be in the future. We feel these factors should be studied in detail before this type of proposal should ever be implemented. 91 91

We wish to go on record as opposing the Gandy Range Extension and Adjacent Airspace For Supersonic Flight Training as it is now proposed. We feel the proposed area could, and should be moved either farther northwest or north onto the Great Salt Lake Desert, northeast of Wendover, Utah. Either of those locations, particularly the northern site, are more remote than the U.S. Air Forces' current proposal. 14,34 14,34

Thank you for your time.

Sincerely,

James & Laurie Good

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvalda, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly** opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

11/3/83

Dear Jake Garn,

This letter is in respect of the Air force perposal to test F-16's over our houses & homes. IN the Snake River Valley (Ibapa, Trout Creek, Partown, & Calio) We have a lot of Small children & animals that these Sonic booms upset We just want you to know that their are people in this valley plus a school. Why cant this perposal go through on Some land that no one lives. We all know there's land like that every where.

Sincerely
Mr. & Mrs. Goodwin

D-140

THE ROCK HOUSE

POST OFFICE BOX 488 · BAKER, NEVADA 89311

12 October 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Re: DEIS- Establishment of the Gandy Range Extension.

Gentlemen:

You have managed well to keep the existence of this proposal and DEIS a secret from the people who live in the vicinity of the "Gandy Range". That any of us found out about it at all before the October 14 deadline for comments on the DEIS appears to have been pure chance.

You could have done much better at notifying citizens who could be expected to be concerned about this proposal. That you have not has led quite a few of my neighbors to suspect that the Air Force would prefer that we did not find out about it in time to comment on the proposal. And since the Air Force recently spent well over twenty million dollars lying to us about the MX, you should be aware that your credibility is getting pretty thin around here.

5 I suggest that the Air Force hold Public Hearings on this proposal and extend the comment period for sixty days. 5

4 The DEIS states that the subject airspace will be "less attractive" to civilian pilots if the proposal is adopted. It identifies the civilian pilots as those "traversing the airspace" and government resource managers counting wildlife. In fact these pilots account for a small percentage of the civilian pilots who use the airspace. The group who uses it most are sheep and cattle ranchers, a fact that the DEIS does not discuss. 4

1 The DEIS states that there are about 350 people living beneath the subject airspace. That figure is definitely on the low side and does not include dozens of ranch families who live in small communities within a few miles of the boundaries. In Snake Valley and Spring Valley alone, whose population outside the boundaries totals about 300 to 400, there are fifteen small airplanes of which I have personal knowledge. There are probably more than fifteen. Even so, that is about one airplane for every six families. These airplanes are used primarily for managing herds of livestock. Many of our young people are learning to fly and there are more pilots than airplanes. 1

The airspace used by these airplanes is also used by jet fighters from Nellis AFB and Fallon Naval Air Station for low level radar evasion training. These fighters fly over our airstrips and our houses several days a week at altitudes of between one hundred and five hundred feet above ground. They come in very fast and make a lot of noise. They are a nuisance and a mortal hazard. 92 92

This airspace is also used by commercial airliners at altitudes of thirty to forty thousand feet. We are already subjected to more sonic booms than we are able to appreciate. There is usually at least one per day, often there are three. The DEIS says that some people like sonic booms and some do not. Well, the people who live in the vicinity of the proposed supersonic range do not like them. I have never met anyone who likes sonic booms. The proposal places this supersonic range directly above and entirely surrounding an Indian reservation. I am certain that in the whole United States there is not a single reservation Indian who likes sonic booms.

The Air Force has often been heard to assume that we get used to these kinds of impacts. Pure wishful thinking. We are tired of them and thoroughly disgusted with the continual sneaky expansion of the airspace used by military aircraft and restricted against our use. We have our own flight training and the safety of our pilots and their families and employees to consider. We can't understand why the Air Force is not apparently concerned, as we are, about the prevention of accidents. We think this proposal is greedy and thoughtless and unworthy of the Air Force.

Sincerely,

Joseph F. Griggs, Jr.

cc: Senator Paul Laxalt
Senator Chic Hecht
Representative Barbara Vucanovich
Representative Harry Reid
Governor Richard Bryan
White Pine County Commissioner Brent Eldridge

2/22/84 FDO

THE ROCK HOUSE

POST OFFICE BOX 488 · BAKER, NEVADA 89311

16 October 1983

Dear Congressman Reid:

I thought you might like a copy of a letter I wrote to the Air Force last week on the subject of the "~~Grady Range~~" extension ~~proposed~~.

I understand that the Airforce and the Navy and the Marines need training. I question whether their training will improve if they keep taking more and more space. They will continue to take it until we tell them they can't have any more. It is probably about time we all begin to develop that message, in my opinion.

Sincerely,

Joseph F. Griggs, Jr.

Joseph F. Griggs, Jr.

D-143

November 21, 1983

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Dale R Hanna
Uvada

RECEIVED
SENATOR GARN

NOV 14 12 05 AM '83

Dale & Deanne Harris
St Rt Box 615 Utada
Pleasant Valley
via Wendover, Ut. 84083

Dear Senator Jake Garn,

It has just come to our attention about two weeks ago that the Air Force plans to open our area to the testing and training of the F-16. If it is at all possible - Please don't let them do this! The people here in the deep creek mt. area are opposed to this proposal. We have sent a petition to the Environmental Planning in Wright-Patterson AFB, Ohio 45433. We hope by this petition that they can see there are concerned people living in this area and we do not like the idea of the F-16 testing in our area.

Our family consists of my husband and myself and our four children, ages 10, 8, 5 & 2. We live on a ranch in the Utada area. We do not want to be subject to any more sonic booms. The AirForce will state facts, not the faults, but until you have lived in this area and heard the sonic boom that now occurs you would not want to be subject

The planes come so low to the ground and use you as a target. They'll say they don't but when you are driving or riding a horse and you see them coming and they dive down at you, you know exactly what they are doing. When the little kids scream, cry and hold their hands over their ears you know you don't want any more planes flying over your home ground.

We feel our concern is genuine! We care about our family, home, friends, our cattle, and our way of living. We enjoy the PEACE & QUITE we have living in this remote area.

Please don't let the AIR FORCE destroy the beautiful aria we live in.

Please reply.

Thanks,
Dale & Deanne Harris

D-146

14

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333
(404) 452-4257
October 12, 1983

Environmental Planning
HZ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Gentlemen:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training at Hill AFB, Utah. We are responding on behalf of the U.S. Public Health Service.

4 We have reviewed this document for possible health effects and have no comments to offer. We believe the proposed alternatives have been adequately addressed. 4

Thank you for the opportunity to review this DEIS. Please send us a copy of the final document when it becomes available.

Sincerely yours,

Frank S. Lisella, Ph.D.
Chief, Environmental Affairs Group
Environmental Health Services Division
Center for Environmental Health

811 Pine Street
Ely, Nevada 89301
November 30, 1983

Mr. James I. Boatright
Deputy Assistant Secretary of the Air Force
(Installations, Environment and Safety)
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Secretary Boatright:

Having been a cattle rancher in Spring Valley most of my life, I wish to protest the expansion of the Gandy Range for Super Sonic Flight Training. I have experienced the effect sonic booms has had on livestock, not to mention the wildlife and people in the area. If permission is granted for such flight training over this area, with up to 1050 flights per month, it will have a devastating effect on the environment, including all forms of wildlife all the way to ground squirrels. 93 93

I believe the area now used for the Gandy range is adequate and wish to go on record as opposing any expansion of air space in Nevada for Super Sonic Training.

Singerely,
Dee Heckethorn Sr.
Dee Heckethorn Sr.

S. R. 5 Box 51
Ely, Nevada 89301
November 30, 1983

Mr. James F. Boatright
Deputy Assistant Secretary of the Air Force
(Installations, Environment and Safety)
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Secretary Boatright:

As a citizen with a license to fly a private airplane, I seriously protest the expansion of the Hill Air Force Base air space for Super Sonic Flight Training.

I own a private business located just Southwest of the proposed expansion boundary. I own my private plane, and do a large amount of business with it, and with this expansion, it would be impossible for me to be able to fly the only free air space which now exists over Nevada. 9

I have flown in and out of Las Vegas, and in and out of the Reno area, and feel that these 2 restriced air spaces are enough restriction on the flight of private aircraft due to the very strict military policies.

I wish to go on record as opposing this expansion.

Sincerely,

Dee Heckethorn Jr.

October 1, 1983

Environmental Planning
HQ AFLC - DEPV
Wright-Patterson AFB
Ohio 45433

attention: James F. Boatright!

Dear Sir!

I am writing to you concerning enlargement of the military supersonic training area in the Gandy Utah, and Spring Valley, Nevada areas.
I am a member of a longtime aviation family, taking away more air-space in the above mended areas would certainly ruin our commuting back and forth by aircraft.
I live in Ely and have a ranch in Snake Valley on the Gandy-road.
At times when I need parts to get my crop up before a rain storm, a trip by plane means a good crop or a bad one (if I can't fly)
I, as well as any of my family members protest any such enlargement since Nevada has already vast amounts of restricted air-spaces. I feel that any more restriction is unjustifiable for.
The Air-Force could use the already restricted areas for such testing
Please take this protest into consideration since I am speaking for many local Pilots

Sincerely,
Emmanuel Arbuthnot

cc:
Sen. Paul Laxalt
Sen. Chic Hecht
Rep. Barbara Vucanovich

October 11, 1983

Environmental Planning
HQ AFLC / DEPV.
Wright-Patterson AFB, OH 45433

FROM: Linda Helderbrand
P.O.B 3773
Stateline, Nev 89449.

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60-day extension in the comment period, from Oct. 14 to Dec 14. In addition, I I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah.

5

5

Thank You,
Sincerely, Linda Helderbrand

Star Rt. Box 612
Via Wendover, Ut. 84083
Nov. 7, 1983

Representative Harry Reid;
1711 Longworth Office Bldg.
Washington, D.C. 20515

Representative Harry Reid;

We are writing to you in regards to the ~~bis for a testing area~~. We are very much opposed to expanding the test area. In fact we are opposed to the test area as it is. We do not see why the test area could not be in some desolate area. There are many. Over our valley is not one. 94

We are ranchers in Nevada and we feel the pilots use our ranch, us, our stock and vehicles as a target practice. They fly so darn low it scares you. For them as well as ourselves. Then they flap their wings at you. When you are on a 94

horse or tractor and a plane drops down on you it startles you. Especially your horse. If you are driving stock it scares them and causes them to scatter. The sonic-booms are great for this.

95 You can't tell me the sonic-booms and pollution from these planes are good for man or animal. 95

96 We feel like this could degrade the value of our property come selling time. 96

97 We believe cattle abortions as well as human are caused by these booms. Hearing is impaired - even in the unborn babies. God only knows what other harm is done. 97

There are remote areas that could be used. We are humans and civilized one even if we do live out in the country. We love it. Let us live.

Sincerely
Merle Henriod
William D Henriod

Wm. J. & Merle Henried
Star Rt. Box 612
Pleasant Valley
Via Wendover, Ut. 84083
November 14, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson A.F.B., Ohio 45433

Dear Sirs;

We reside in Nevada and are very concerned about the supersonic testing over our valley. It is not a desolate place. We ranch here in this pretty little valley. We and many others. We love our enviroment and life style. Do not take this away from us, please. Just because we don't live in the city doesn't mean we are not civilized. We are doing our part raising food for our fellow Americans. There is plenty of desolate areas that could be used for the testing and sonic-booms. Come look at our region and see for yourselves why we want it preserved.

98 What will happen to our buildings - our stock - our health - the value of our 98

property? There are so many unanswered questions. Would you like all those sonic booms going off around you everyday? Even if only 38 ~~Dat~~ the ground a day? Consider some facts and look for a more desolate area, please.

98 Cont.

98 Cont.

We are not against civil defense just against being used.

Sincerely
Merle Henriod
William J Henriod

1

Wm. J. & Merle Henriod
Star Rt. Box 612
Pleasant Valley
Via Wendover, Ut. 84083

November 14, 1983

Senator Jake Garn
United States Senate
Washington D.C. 20510

Honorable Senator Jake Garn;

We are greatly opposed to the expansion of the restricted air space for supersonic testing. We are not opposed to civil defense. We are opposed to having the test area over our heads. There is plenty of desolate areas that could be used. We are tired of being used as targets for their little war games.

It is bad enough now being on a horse driving cattle when one to four jets go over you as low as they can.

There is so many questions that need to be answered. How are the sonic-booms going to affect our buildings = our stock - our health - the value of our property? And many more.

We are not coyotes living in the wild. We are human beings trying to raise food for our fellow Americans. We are having a hard enough time without this new thing to put up with.

We love our clean air and the peace and quiet this country gives us. We love to live and Ranch here. Please make it possible for us to remain this way.

Sincerely

Merle Heinrod

William J Heinrod

D-157

12

TO: ENVIRONMENTAL PLANNING,
HQ AFLC-DEPV,
WRIGHT-PATTERSON AFB, OH 45433

Date 10/11/83

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

Jack Holmes
Signature

Betty Holmes
Address

1152 So. Maine
Fallon, Nevada 89406

U.S. Department of Housing and Urban Development
Denver Regional/Area Office, Region VIII
Executive Tower
1405 Curtis Street
Denver, Colorado 80202

October 5, 1983

Mr. James F. Boatright
Deputy Assistant Secretary of the Air Force
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson Air Force Base, OH 45433

Dear Mr. Boatright:

We have reviewed your Draft Environmental Impact Statement (EIS) for the Gandy Range, Hill Air Force Base, Utah, and find that the statement adequately addresses our area of concern.

In several instances the EIS refers to the U.S. Department of Housing and Urban Development (HUD) noise criteria and standards. Although the references are technically correct, we would like to clarify the reference found on page 37 of the Draft EIS. The reference states:

4 "Day-night average sound levels below 55 decibels are considered by the Environmental Protection Agency (EPA) to have no effect on public health and welfare, and sound levels below 65 decibels are completely acceptable for residential purposes by the U.S. Department of HUD." 4

Even though HUD does not require noise attenuation measures for housing developments which have external noise exposures of 65 DNL or less; it is a Department goal that exterior noise levels do not exceed a day-night average sound level of 55 decibels. This level corresponds with that established by the EPA as a goal for outdoor residential areas; however, this goal does not take into account cost or feasibility. Therefore, for the purposes of determining HUD's participation in housing developments, projects with a noise level of 65 DNL and below are considered acceptable (24 CFR Part 51.101).

Thank you very much.

Sincerely,

Robert J. Matuschek

Robert J. Matuschek
Director
Office of Community Planning
and Development, 8C

8310496

TO: ENVIRONMENTAL PLANNING, HQ AFLC/DEPV, WRIGHT-PATTERSON AFB, OH 45433 DATE Oct. 10, 1993

FROM: Julie C. Hughes P.O. Box 444 Lovelock, NV 89419 (Name, address)

5 I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec. 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely, 6

Julie C. Hughes
Signature

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Rhonda Hunter

PA
OOAC/PC
JA
DE

November 21, 1983 650IRAM/PC

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people.

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Victoria Hunt

D-162

United States Department of the Interior

OFFICE OF THE SECRETARY
OFFICE OF ENVIRONMENTAL PROJECT REVIEW
Room 688, Building 67
Denver Federal Center
Denver, Colorado 80225

IN REPLY REFER TO: ER 83/1095

OCT 12 1983

Environmental Planning
HG AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Sirs:

We have reviewed the draft environmental impact statement for Gandy Range Extension and Adjacent Airspace for Supersonic Flight Training, Eastern Nevada and Western Utah. We have the following comments.

Flight Airspace

The Draft Environmental Impact Statement states that aircraft are not prohibited from use of the Gandy Range Extension portion, but the proposed action may increase the potential for conflict between military flights and civilian aircraft. The Bureau of Land Management (BLM) conducts numerous resource flights, fire prevention/detection and suppression flights in the affected area.

99 During the fire season, detection and suppression activities in the area include the use of helicopters, air tankers and smokejumpers. It is the BLM's concern that fire suppression activities by air may be limited due to an increase in military aircraft, which would affect the Bureau's fire program. 99

It is stated in 4.3.1.2 that in increased usage of military aircraft may make the area less attractive to other pilots. This may be true for civilian pilots, but the Bureau has public land management responsibilities that will require use of the airspace. When fires occur and aircraft are being used, it may be necessary to establish an Airspace Restriction for all aircraft.

100 Impacts to non-military flights within the proposed airspace need to be more fully addressed. The Ely District BLM is charged with fire control within the proposed airspace, including the Goshute Indian Reservation. Will the BLM be allowed to fly air reconnaissance after lightning storms or would flights have to be scheduled around military maneuvers? Would the BLM be allowed to perform unscheduled emergency flights for fire suppression activities? Delays in locating and suppressing wildfires can lead to undesirable resource and property damage. Would all non-emergency BLM flights have to be scheduled in advance? What safety precautions would be followed to prevent collisions? 100

101 What is the current minimal level airspace for military aircraft operations? F-16s have frequently been observed 500 feet above the terrain and lower. 101

Page 37, Item 4.1.2.1, second paragraph: Any overflights below 5,000 AGL could present conflicts with the BLM doing Wilderness Study Area surveillance in the Goshute and Deep Creek Mountains or with helicopters/planes which may be involved with fire-fighting efforts in the airspace. Conflicts occurred with F-16 jets on the Ferguson Mountain fire during the summer of 1983.

Fish and Wildlife Resources

102 The environmental assessment presents some data on studies of sonic booms on several wildlife species. However, there appears to be a considerable gap in the data available on its effects on a wide variety of species, and on the effects of long-term exposure and sub-level responses as was pointed out in the summary. It is known there may be a wide range of responses to external stimuli between species and between individuals of the same species. The overall effect of long-term exposure to sonic booms should be further explored. 10

There are several locations in and immediately adjacent to the proposed extended range for supersonic flight that are important habitats to many species of high Federal interest besides those you address in the assessment. Fish Springs National Wildlife Refuge is immediately adjacent to Dugway Proving Ground and shares a common boundary. Fish Springs is an important nesting and resting habitat for migratory waterfowl and shorebirds. Blue Lake, south of Wendover, and other important waterfowl and other wildlife habitats are found in the proposed extension. These desert areas are critical to desert wildlife populations.

103 The over pressures created by supersonic flights could be expected to carry through aquatic habitats to some extent. The Federally listed endangered Lahonton cutthroat trout(Salmo clarki henshawi) is found in a small stream on Pilot Peak near the range extension and the sensitive Bonneville cutthroat trout (Salmo clarki utah) in several small streams in the Deep Creek Mountains. Their habitats are extremely limited and these species could be subject to external stresses. 10S

104 The EIS should address the planned bighorn sheep transplant by the Utah Division of Wildlife Resources (UDWR) into the Deep Creek Mountains. While studies quoted on page 46, paragraph 3 of the EIS indicated that sonic booms created minimal impacts or disturbance to bighorn sheep, these studies were done on an established population. Impacts to a transplanted population could likely be much greater since newly introduced animals are much more susceptible to disturbance. The proposed action could decrease the chances for a successful bighorn sheep transplant and should be further documented. 10

105 The proposed action, if approved, would be a good opportunity to study and evaluate the impacts on nesting, breeding and brood-rearing raptors. Raptor breeding activitiy and nesting success, particularly for bald eagles, prairie falcons, red-tailed hawks and great-horned owls, has been documented over the past 4 to 5 years by BLM and UDWR. Good baseline data exist for the area. Such a monitoring study should be adopted as a mitigating measure. The concentration of nesting raptors in the Deep Creek Mountains is important and should be protected. 10

Considering the need for supersonic flight training, the relatively unknown effect of some booms on fish, wildlife and their habitats over the short and long term, and the proximity of unique habitats in and adjacent to the extended range, the Fish and Wildlife service (FWS) recommends the Air Force and FWS work together to study the effects of short and long term sonic boom intrusions to fish and wildlife.

Recreation

4,131, 295 The BLM is seriously concerned that sonic impacts would degrade the sense of isolation experienced by visitors to the wilderness study areas (WSAs), as well as affecting residents and travelers in the area. The Air Force should be aware that all three WSAs in the proposed area (Goshute Peak, Bluebell, and Deep Creek) are currently under consideration to be recommended to Congress for wilderness designation. The Governor of Utah has expressed his interest and priority for such designation. In the event these areas are designated as wilderness, BLM will probably seek to restrict activities which would detract from the sense of isolation. 4,131. 295

We appreciate the opportunity to review the DEIS. More specific comments are enclosed.

Sincerely,

Robert F. Stewart

Robert F. Stewart
Regional Environmental Officer

Enclosure:
Specific Comments

SPECIFIC COMMENTS ON THE GRANDY RANGE DEIS

1. Page V, item b: If Wendover, Utah and West Wendover, Nevada (immediately north of the proposed supersonic test space) will experience sonic booms, many more than 350 people will be affected, considering the resident population and tourism. Figure 9.0 on page 52 shows that this could occur. Also, the noise
6 analysis assumes an average elevation of 5,000 feet MSL or below for people exposed to noise, but the analysis here doesn't consider people or wildlife at higher elevation (e.g., users of WSAs) that would be disturbed. What available data indicates wildlife and domestic animals demonstrate limited response and no nestling death or eyric abandonment when subjected to sonic booms? Was the testing done in this general region or somewhere else? 106

2. Because of a variety of factors mentioned within the Draft EIS, the impact of the sonic booms on the local population may be greater than that analyzed:

07 a. On page V it is assumed that people within the proposed airspace live at or below 5,000 feet. Six thousand feet would probably be a closer average. 107

08 b. On page 9 it is stated that limited use of the proposed airspace by other supersonic aircraft will create sonic booms of greater intensity. 108

09 c. On page 11 it is stated that maximum usage for supersonic flight within the area will occur frequently. 109

d. On page 16 it is stated that the volume of training may increase over present levels.

110 e. Page 38 mentions the "afterburner light-off" which can sound like a sonic boom. What is the decibel level? 110

111 f. Page 39 mentions the focus booms (with two to five times the peak nominal overpressure) and the secondary booms. 111

184 3. Page 29, item 3.1.2: The Goshute Mountains are higher than the 7,800 foot portion of the Deep Creek Mountains described here. 184

4. Page 32, item 3.1.3: The Goshute Mountains definitely have a forested cover of both pinyon-juniper and subalpine vegetation, such as white fir, bristlecone, etc.

112 5. Page 32, item 3.1.4: The area is a major migratory route for raptors, and research of this aspect, which has occurred for the past five years, is an annual event in the Goshute Mountains. Documentation on this raptor migration area indicates that this may be the single largest concentration within the West. 112

113 6. Page 32, item 3.1.4.2 (American Peregrine Falcon): This discussion should include more information. The historic eyrie mentioned in the area of Wendover is near Montello. However, the best historic site in Nevada for potential 113

peregrine reintroduction is below the proposed supersonic airspace. This site has been recommended in the Wells Resource Management Plan as an area of critical environmental concern of 6,200 acres to 16,200 acres. Reintroduction may occur within the next 2 or 3 years. This is a major omission, even though it is said that there will be no impact (pages 51-53, item 4.1.3). In addition, a peregrine falcon was observed within the boundaries of the proposed supersonic airspace during the summer of 1983 flying above the Goshute Mountains higher than the 8,000-foot elevation.

112 7. Page 33, item 4: Steptoe Dace in Lookout Spring (T26N, R67E, Sec. 30 NESE) are located within the proposed airspace. 4, 112

114 8. Page 45, third paragraph: Overflights resulting in sonic booms will have an impact on individuals using the Wilderness Study Areas (WSAs). 114

9. Page 52-53, item 4.1.3: It may be incorrect to say that there are no adverse impacts to wildlife. It should be stated that the effects are not known or are poorly documented. EPA states that they cannot prove that sonic booms definitely hurt animals. Particular impacts to wildlife may occur from the sonic booms:

115 a. Signal interference may occur. Animals use vocal calls to show alarm, and to recognize mates, young, territory, danger and food. If these sounds are masked, care of young, mating, predator detection, prey detection, and spacing for optimum population can be disrupted. 115

b. Nest abandonment may occur. Sage grouse especially have difficulty staying on a nest during a disturbance. Populations are not healthy enough to withstand even a slight decrease in nesting success.

c. Physiological impacts can occur. The added stress to an animal from the sonic booms could decrease the animal's ability to withstand additional stress and thus impair chances for survival.

116 10. Page 53, paragraph 1: There are documented sitings of peregrine falcons in the Goshute Mountains. What about the impact of raptors in jet engines? 116

117 11. Page 54, item 4.1.5: This section requests that private pilots file a pre-flight plan with the Air Force and states that aircraft are not always monitored by the 299th Communications Squadron radar. It would reduce conflicts if the F-16 pilots would <u>always</u> fly above 5,000 feet AGL. 11

118 12. Page 57, last sentence: If training doesn't occur over the mountains, such as the Goshutes, then why is the area drawn in as the northern ellipse? 11

119 13. Pages 57-59, item 4.3.2.1 and Figure 10.0: The Bluebell and Goshute Peak WSAs are not shown or discussed, and the EIS does not analyze impacts on these areas. Refer also to page 34, item 3.1.5.4: This section states that recreation is related to the area's unspoiled nature; this is true of the Goshutes, also. 11

120 14. Page 53, item 4.1.4: It is stated that, "no specific archaeological sites have been identified in the land area beneath the proposed supersonic airspace." This is incorrect. Sites have been identified and the USAF should consult with the appropriate State Historic Preservation Office and/or BLM District Office. 120

4 15. The following should be used as a reference as it summarizes the most significant studies on noise effects on wildlife between 1971 and 1980. It was not listed in the Draft EIS bibliography. 4

United States Environmental Protection Agency, 1980. Effects of Noise on Wildlife and Other Animals Review of Research Since 1971. EPA Document #550/9-8-100. Office of Noise Abatement and Control, Washington D.C.

4 16. BLM reference sources which might be consulted include the Wells Resource Management Plan, prepared by the Elko District; the Schell Management Framework Plan (MFP), prepared by the Ely District; Topaz MFP, prepared by the Richfield District; and Gold Hill MFP, prepared by the Salt Lake District. 4

121 17. In February, 1982, Murray Sant at Hill AFB (2849 ABG/DEEXX) was sent a copy of the Elko District (BLM) Wells Resource Area Peregrine Falcon Habitat Inventory which identified the historic peregrine falcon eyries and their potential for reintroduction. 121

C. F. Ch
Lin Yo
K. Davis

INTER-TRIBAL COUNCIL OF NEVADA

PHONE (702) ~~786-8128~~ 329-3955
650 S. ROCK BOULEVARD SUITE 11 • RENO, NEVADA 89502
P.O. Box 7440, Reno, NV. 89510

December 1, 1983

Public Affairs Office
OO-ALC/PA
Hill AFB, Utah 84056

Dear Sirs:

The Inter-Tribal Council of Nevada, Inc. whose governing body is comprised of 25 federally recognized tribal groups strongly endorse the attached resolution, which will support the concerns of the Goshute Reservation and rural Nevadans in their quest to halt the proposed encroachment over and upon Nevada land areas.

Please give this resolution your utmost consideration when dealing with the issue and keep us informed as to the progress.

Sincerely,

Eugene W. Pasqua

Eugene W. Pasqua
Executive Director

EWP:cf

Attachment

RESOLUTION

ITCN-83-29

OF

INTER-TRIBAL COUNCIL OF NEVADA, INC.

WHEREAS, the Inter-Tribal Council of Nevada, Inc. is a Nevada corporation representing the twenty-three (23) Indian tribes of Nevada whose purpose is to promote and protect the economic, social and physical well being of the Indian population of Nevada, Inc., and

WHEREAS, the Executive Board of the Inter-Tribal Council of Nevada, Inc. is the governing body of the corporation and is comprised of the Chairman of the twenty-three federally recognized tribes in the state of Nevada, and

WHEREAS, the United States Air Force (USAF) proposes to establish a Supersonic Operations Area (SOA) on the Nevada/Utah border in Elko and White Pine Counties, and

WHEREAS, this (SOA) would cover approximately twenty nine hundred (2,900) square miles of land that is inhabited by over three hundred and fifty (350) people including the Goshute Indian Reservation which will be directly under the SOA, and

5 WHEREAS, the Air Force has failed to adequately notify the inhabitants within the SOA, so that they could voice their concerns regarding this proposed SOA, and 5

122 WHEREAS, the Draft Environmental Impact Statement (DEIS) is inadequate in its determination of the long term effects on the people, public safety, public health, wilderness and wildlife of the proposed SOA, and 122

WHEREAS, Dr. Richard Bargen aka "The Flying Doctor" and the group known as the Concerned Rural Nevadans have initiated a lawsuit against the Air Force in hopes that the Air Force will reconsider or halt their plans for restricting this air space in Eastern Nevada especially directly over the Goshute Indian Reservation.

NOW THEREFORE BE IT RESOLVED, that the Executive Board of the Inter-Tribal Council of Nevada, Inc. fully supports the efforts of Dr. Richard Bargen and the Concerned Rural Nevadans in their quest to halt the United States Air Force's encroachment over and upon additional Nevada land areas which include the Goshute Indian Reservation.

BE IT FURTHER RESOLVED, that the Inter-Tribal Council of Nevada, Inc. will support the Goshute Indian Reservation should Goshute initiate separate legal action on its own behalf against the Air Force.

CERTIFICATION

The foregoing resolution was adopted at a duly called meeting of the Inter-Tribal Council of Nevada Executive Board, held on the 19th day of November, 1983, at Reno, Nevada by an affirmative vote of 15 for; 0 against; and, 0 abstentions.

William Rosse Sr.

William Rosse, Sr., Secretary
ITCN Executive Board

JUAB COUNTY

16 Dec
No ater

THE KEY COUNTY OF
CENTRAL UTAH

BOARD OF COMMISSIONERS

Joseph A. Bernini, Chairman
Clinn A. Morgan
R. Roscoe Garrett

NEPHI, UTAH 84648

December 12, 1983

State of Utah
State Capitol Building
Salt Lake City, Utah 84114

Attn: Utah State Governor Scott M. Matheson

Regarding: Draft Environmental Impact Statement
Establishment of the Gandy Range Extension
And Adjacent Restricted Airspace as an Area
For Supersonic Flight Training

Dear Governor Matheson:

The Juab County Commission has reviewed the Draft Environmental Impact Statement as published by the Department of the Air Force. We have the following comments regarding the manner in which the Draft EIS was circulated for review and our reaction to material in the document itself:

123 1) The notification of public officials was inadequate. The Juab County Commission learned of the public information hearing only the day before it was held in Ibapah, Tooele County. Anything as significant as this issue should have been presented in each of the counties where supersonic activities would occur. Juab County contains a large portion of the proposed supersonic range and has a substantial number of citizens who would be impacted. It was stated by the Air Force at the Ibapah hearing that they have provided news releases to public agencies regarding the range. We would be interested in a copy of the list of public agencies to whom notification was sent, particularly if Juab County was included. 123

124 2) In the Air Force Draft EIS it is stated that of 125 booms to be created per day, between 30 and 38 would reach the ground. At the hearing, the Air Force assured us that 38 would be a worst case situation. Is there any reason we should expect less than 125 what the Air Force is asking us to accept? We believe the public is entitled to know what magnitude of sonic blast the aircraft is capable of producing at minimum altitude and maximum velocity. 126 Also, how far will sonic booms be heard at both the upper and lower altitude limits of the range? 124 125 126

127 3) It is our understanding that the U.S. Navy is requesting 5,600 square miles for a supersonic training range in Central Nevada. What steps are being taken by the Department of Defense to coordinate the activities of the Air Force, the Navy, the Army, etc. to prevent duplication of facilities for each branch of the service? If no measures have been taken yet, we feel a regional plan should identify what the military intends to acquire over the next several years. This would avoid the present piece-meal approach where the various military groups come back year after year with additional requests. 127

128 4) Of primary concern to us is the impact sonic booms will have on animals and humans. The Draft EIS makes no evaluation of the effects that sustained bombardment may have to animal and human life. Although the report infers that animals and humans may become somewhat conditioned to the startling booms, we feel there is inconclusive evidence to verify that the booms are not detrimental to health. The statement in the Draft EIS that "chronic direct effects on wild animals have not been investigated, but no significant effects of this kind are presently foreseen" seems somewhat unsure. People at the Ibapah hearing stated that present sub-sonic activities adversely affect their livestock. Supersonic blasts are definitely perceived as more severe than present activities. 128

129 Even though the Air Force, at the Ibapah hearing stated that generally, no one person will hear over one or two booms per day, what assurance do we have of this, and if we find that the Air Force has under estimated the problem, what recourse do we have once the supersonic range is created and in use? 129

130 5) There are three schools located in proximity to the proposed supersonic range. Interruption of their schooling will definitely have a negative impact on the children's learning process and is an infringement on the rights to the children to a public education. 130

131 6) A wilderness area has been proposed for the Deep Creek Range southeast of Ibapah. The daily bombardment from the training range is not consistent with the original intent of creating the wilderness area. 131

122 7) Another issue is that of migratory birds. The Gandy - Ibapah area contains a large number of migratory birds and resident raptors. The Draft EIS fails to adequately address known or perceived impacts sonic booms will have on these protected species. 122

132 8) Safety considerations are a concern. The Gandy MOA was created for joint civilian and military use of airspace. Jet aircraft operating in the airspace have been restricted to sub-sonic speeds with the idea that civilian and military pilots could see each other and avoid collisions. If jet aircraft are now allowed to operate at supersonic speeds, the see and avoid concept for avoiding collisions is impractical. Closure rates between the two classes of aircraft would be much too rapid for avoidance responses. As there are inhabited areas beneath the proposed range, this could be a severe hazard to persons, animals or property. 132

142

9) In addition to the creation of the supersonic training area within the Gandy MOA, it has also been learned that the Federal Aviation Administration proposes to create a restricted area over most of the Gandy range. The Juab County Commission is opposed to the creation of any such restricted airspace until public information meetings are held with residents that live beneath the proposed restricted area and with resident pilots who utilize the airspace that is proposed to be restricted.

142

In conclusion, we have carefully monitored comments at the public hearings and based on both public sentiment and the several questions we feel are still unanswered, we must oppose the creation of a supersonic training area within the Gandy MOA.

In addition, we have received the following attached petition from concerned citizens who live under or near the proposed supersonic training area and we, as a County Commission endorse that petition.

Respectfully yours,

Joseph A. Bernini

Juab County Commission

JCC/kdl

cc: State Planning Coordinators Office
State Clearinghouse A-95
116 State Capitol Building
Salt Lake City, Utah 84114

Utah State Senator Jake Garn
4203 Dirksen Senate Office Bldg.
Washington, D.C. 20510

Utah State Senator Orin Hatch
411 Russell Senate Office Bldg.
Washington, D.C. 20510

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Bureau of Land Management, Utah State Office
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Bureau of Indian Affairs
P. O. Box 28
Elko, NV 89801

Utah Division of Wildlife Resources
1596 West North Temple
Salt Lake City, Utah 84116

Nevada State Planning Coordinator
Capitol Complex
Carson City, NV 89710

Nov 12, 1983

4, 32

I am writing this letter to protest the expanded use of air space over our community for Super sonic flights.

4.32

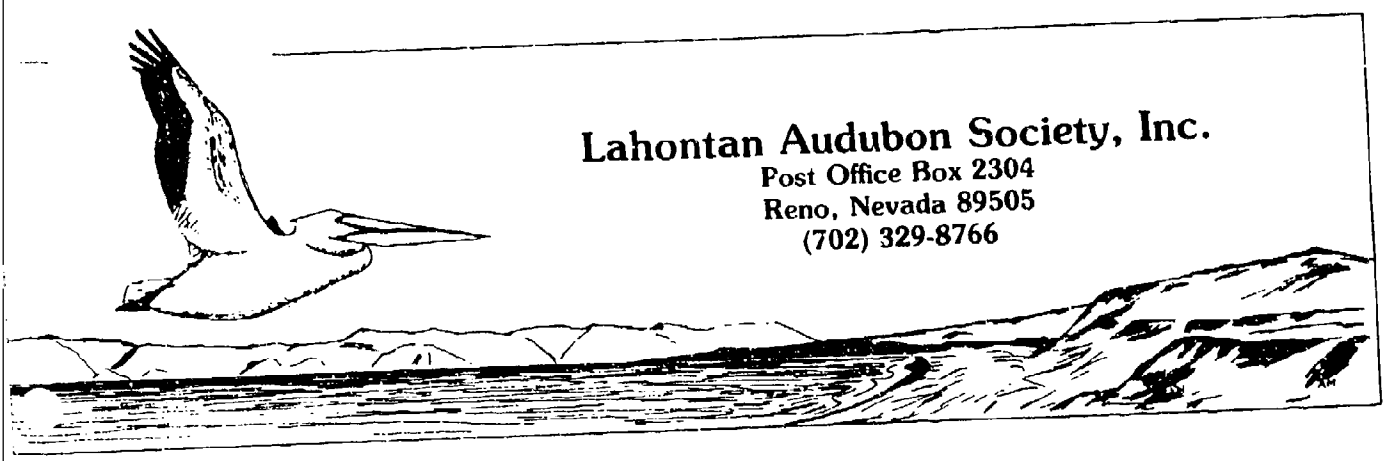
My husband grew up in Wapak and when open heart surgery and a serious back surgery forced his retirement we decided this was the place to live. We expected the quiet rural life style of the country. The Sonic booms have been limited up till now but each one has an adverse effect on his heart problem. His second open heart surgery was about 19 months ago and we would

like to preserve our
quiet rural way of
life.

We are not against
our nations defense
but if you will look
at the map there are
miles of area that
is unpopulated.

Thank you for reading
my own personal opinion.

Mrs Harold (Norma) Kelley
Ibapah
Utah 84034



Lahontan Audubon Society, Inc.
Post Office Box 2304
Reno, Nevada 89505
(702) 329-8766

October 10, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

re: Gandy Range Extension DEIS

Dear Sir:

We are appalled at such a poor analysis of the impact on wildlife and Nevada wilderness in the DEIS.

Specifically in regards to raptors, the Goshute Mountains are host to one of the largest concentrations of varied raptors in the United States. During the six week fall migration, raptors are funneled through the Goshute Mountain passes as they leave the Great Salt Lake area. They are concentrated here due to thermal uplifts, food and nesting sites.

4 The raptors are concentrated in such numbers and varieties that the Nevada BLM and the USFWS collect and band at this site every fall. (Refer to the Wells Resource Management Plan and EIS, p. 3-5). 4

133 Super sonic operations in the North Ellipse will impact all these raptors and other wildlife. On page 32 you state that "only the bald eagle frequents the area of the proposed supersonic flight airspace". 133

We also take exception with your statement that the only impact will be from sonic booms. If low level "war games" occur as proposed in the text, and if they are similiar to, if not actually part of, the Red Flag operations out of Nellis, then direct bird-aircraft collisions will occur. The Nellis war games operations have been observed numerous times, and are recommended to occur, by the Air Force, at extremely low elevations.

131 The DEIS states there are no Wilderness Study Areas (WSA) in the Nevada study area. Totally included in the proposed supersonic area is Goshute Peak WSA, which was recommended for inclusion in the National Wilderness Preservation System in BLM's Wells Resource Area Management Plan and EIS, May, 1983. This area is also strongly supported by Lahontan Audubon Society. The supersonic operations area is adjacent to the South Pequop and Bluebell WSA's, which have also received recommendations from the BLM for inclusion in the National Wilderness System. 131

134 Although this proposal does not propose to expand the boundries of the MOA, just to intensify it, we feel there should be a regional analysis and plan for airspace allocation. With proposals recently made public by the Air Force and Navy, over 30 percent of the airspace over Nevada is usurped for military use. This has occured without public input or the opportunity to comment. We feel there should be public hearings in Nevada and Utah on this specific proposal and on the larger issue of adequate and fair allocations of the public airspace. 134

Sincerely,

Janet C. Meierdierck

Janet C. Meierdierck
President

KDM

PAUL LAXALT
NEVADA

COMMITTEE ON APPROPRIATIONS
COMMITTEE ON JUDICIARY

United States Senate

WASHINGTON, D.C. 20510

November 14, 1983

WASHINGTON OFFICE:
315 RUSSELL OFFICE BUILDING
(202) 224-3542

CARSON CITY OFFICE:
705 NORTH PLAZA STREET
(702) 883-1930

LAS VEGAS OFFICE:
300 LAS VEGAS BLVD., SOUTH
(702) 385-6547

RENO OFFICE:
300 BOOTH STREET
(702) 784-5568

Dear LTCOL Main:

Attached please find a copy of a letter signed by Mr. Bill Vincent, Southern Coordinator for Citizen Alert regarding the Draft EIS for the Gandy Range Extension and adjacent restricted airspace for supersonic flight training.

Mr. Vincent raises several questions and concerns which appear valid.

Would you please send me a copy of your response to his letter to my Las Vegas, Nevada office. I have asked my Regional Assistant, Ace Robison, in Las Vegas to follow-up on this matter. Please direct any correspondence to his attention.

Sincerely,

PAUL LAXALT
U.S. Senator

PL/rs

Enclosure

LTCOL Don R. Main
HG AFLC/DEPV
Wright-Patterson Air Force Base
Ohio 45433

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvalde, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Carol Lewis

D-180

November 21, 1983

Dear [illegible],

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly** opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Elaine K. Lewis

D-181

ARTHUR J. MAJEWSKI
48 BOB WHITE WAY
RENO, NEVADA 89502

DEPT. OF AIR FORCE
ENVIRONMENTAL PLANNING
HQ. AFLC - DETV
WRIGHT PATTERSON AFB.
OHIO 45433

10-22-83.

SIRS:

9,142 I AM OPPOSED TO THE AIR FORCE TAKING MORE OF OUR NEVADA AIRSPACE FOR ITS PRIVATE USE. 9,142

THANK YOU

Arthur J. Majewski

Maya Miller 6185 Franktown Rd. Carson City Nevada 89701

October 10, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

I have just received word from personal friends in the eastern part of our state, and from Citizen Alert, which monitors military take-over of Nevada lands for us, that you are currently in the middle of the process of pre-empting yet another area of Nevada's air space for your purposes, namely, supersonic operations.

5 As one who has long been involved with caring for Nevada's land and water, I want to join now with others in formally requesting a 60-day extension of the comment period on the DEIS which you have apparently developed in secret.

It is outrageous that citizens of this state are the last to learn about your intentions.

We do understand that the Governor's office has known about this new usurpation for some time, but you need not assume that your informing that office will necessarily "trickle down" to the rest of us. In this case, it has not. And it is your obligation by law to let concerned citizens know your intentions to change current regulations of our land, air, and water.

We have become familiar out here with a kind of arrogance regarding public opinion that seems par for the Air Force, but we are not yet willing to relinquish civilian control over military which is basic to the American concept of democratic government.

Sincerely,

Maya Miller

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

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Sincerely,

November 21, 1983

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I want to go on record as **strongly opposing** the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

November 16, 1983

Staff Judge Advocate
OO-ALC/JA
Hill Air Force Base, UT 84056

Dear Sirs:

In response to your announcement of DEIS for Gandy Range Extension letter of 10 November 1983, I submit the following observations.

The DEIS addresses a prime problem of the immediately adjacent area, but it fails to address the area of more local concern. With the 388 TFW located at Hill, any sortie flown must originate and terminate there.

135 The DEIS should include those areas subjected to high noise levels on takeoff and landing. 135

136 Regulations should be established (and enforced) to minimize noise levels for the people living south of Hill in Layton and North Kaysville, and north of Hill in Plain City, Warren, Roy, and Riverdale. 136

137 I, for one, cannot understand why military aircraft must use low level approaches and afterburners for takeoff and landings when commercial aircraft are much quieter. 137

Perhaps, in an emergency environment, that would be permissable, but for normal training sorties it seems unnecessary.

It always seems that these noise disturbances occur at awkward times just before people are arising and when they are retiring. Couldn't low noise approaches be implemented and the use of afterburners be restricted in the areas near Hill?

Sincerely yours,

Richard H. Nelson

Richard H. [redacted]
3824 South 2000 West
Roy, UT 84067

THE STATE OF NEVADA

EXECUTIVE CHAMBER

Carson City, Nevada 89710

RICHARD H. BRYAN
Governor

October 13, 1983

TELEPHONE
(702) 885-5670

James F. Boatwright
Deputy Assistant Secretary of the
Air Force
(Installations, Environment and Safety)
Environmental Planning
NQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Re: SAI NV #84300014 Project: EIS, Gandy Range
Hill AFB, Utah

Dear Secretary Boatwright:

In reference to the Gandy Range Extension and Restricted Airspace (Draft Environmental Impact Statement), please be advised that the State of Nevada is directly opposed to any further airspace restrictions or reclassifications by the U.S. Department of the Air Force.

142 The Air Force proposal to establish a supersonic training area within the Gandy Extension will create further restrictions on commercial and private aviation in Nevada. It should be noted that 7,675 square miles of the state's airspace are currently restricted and over 25,000 square miles are now categorized as military operating areas (MOA). In effect, 36.7% of Nevada airspace is under federal agency control other than normal FAA control. 142

Our concerns regarding additional airspace restrictions also include the potential for future "blocking" of large airspace areas over the state. Historically, federal agencies have acted independently in expanding MOA boundaries in Nevada and the existing cumulative results have restricted the size of airway corridors and the ease of aviation access between Nevada communities and adjoining states.

In addition to expansion of MOA boundaries, status has been changed without proper notification. On 10 October 1983, between 0800-0830 hours, the State of Nevada Aircraft 711NV was

0 3412 GOMS9

informed by FAA, Salt Lake, that the alert area of Nellis was restricted between 18,000 and 51, 000. This amounts to activation of the Continental Operations Range which was previously opposed by the State. It is my understanding that FAA retains tapes for seven days, allowing verification in this case up to October 17, 1983.

All Environmental Impact Statements developed for airspace use in Nevada should include an examination of private and commercial aviation impacts. Baseline data should be provided for aircraft flights under both visual and instrument flight rules within MOA flight ceilings; this data was not provided in the Gandy EIS. Moreover, it is our contention that the Department of Defense must examine the statewide impacts of any future airspace classification or restriction in Nevada and that such examination must include an analysis of private and commercial airspace use between and within all designated MOA's in the state. This analysis should be presented in the final EIS for the proposed Gandy Range Extension/supersonic flight training area.

138

138

Under the authority of Presidental Executive Order 12372, the above comments are made from the State's designated single point of contact and are presented as a State Process Recommendation. Please advise of your actions to accommodate our concerns.

Sincerely,

RICHARD H. BRYAN
Governor

RHB/sc
cc: Brent Eldridge, Chairman
White Pine County

J. L. Helms, Director
Federal Aviation Administration

STATE OF NEVADA
STATE OFFICE OF COMMUNITY SERVICES
CAPITOL COMPLEX
CARSON CITY, NEVADA 89710
TELEPHONE (702) 885-4420

RICHARD H. BRYAN
GOVERNOR

LINDA A. RYAN
DIRECTOR

October 12, 1983

Mr. James F. Boatright
Deputy Assistant Secretary of the
U.S. Air Force
(Installations, Environment & Safety)
Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Re: SAI NV #84300014 Project: EIS, Gandy Range
Hill AFB, Utah

Dear Mr. Boatright:

Attached are the comments of the Nevada State Departments of Transportation and Wildlife and the State Divisions of Lands and Parks concerning the above referenced project.

These comments are provided by the State Clearinghouse as an attachment to the State's Process Recommendation prepared by Governor Richard H. Bryan.

Sincerely,

Linda A. Ryan
Director

LAR/aa

Enclosures

NEVADA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BOARD
RICHARD H. BRYAN, *Governor*, Chairman
BRIAN McKAY, *Attorney General*
DARREL R. DAINES, *State Controller*

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

1263 SOUTH STEWART STREET
CARSON CITY, NEVADA 89712

A. E. STONE
Director

October 11, 1983

IN REPLY REFER TO

Linda A. Ryan, Director
Community Services
Attention John Walker
Capitol Bldg. Complex
Carson City, Nevada 89710

PSD 1.06

Re: EIS GANDY RANGE

Dear Ms. Ryan:

We are strongly opposed to the proposed change of the Gandy Military Operations Area (MOA) from one of ALERT, where all pilots must be alert because of possible high volume of training or unusual activity, to an area of RESTRICTION/Supersonic where flight though not wholly prohibited is often restricted or closed because of unusual often invisible hazards.

The impact upon aviation as a viable means of transportation to the nations fastest growing State has been selectively ignored by the Department of Defense (DOD) and the Federal Aviation Administration.

9 This Environmental Impact Statement (EIS) expresses the desire to be compatable with aviation but does not review the limited air space and the negative aspects of greater restrictions. This includes the new East-West route proposed by the Nevada Air System Plan. 9

139 The EIS proposes an airspace extending from 5,000 feet Above Ground Level (AGL) to approximately 58,000 feet Mean Sea Level. There is also mention of using valleys for pre combat evasive actions, and that a change of a few thousand feet would be permissable. 139

132 The above statements are sufficiently vague that we must concur with the Aircraft Owners and Pilots Association in that flight will be unsafe at any speed or altitude. 132

Historically the west has been a ready resource for land and airspace to meet the needs of Federal programs without fear of impact. This is no longer true. A system planning need exists whereby the various states acting independently and in concert should develop an air space plan which would meet their needs and that of the Nation. This would enable proper review of existing and proposed MOA's in the Western States. Such an approach would place airspace and aviation on par with other natural resources and transportation modes.

O 202A—HO

We are enclosing maps of Arizona, Nevada and Utah that show the extent of MOA's in these three states.

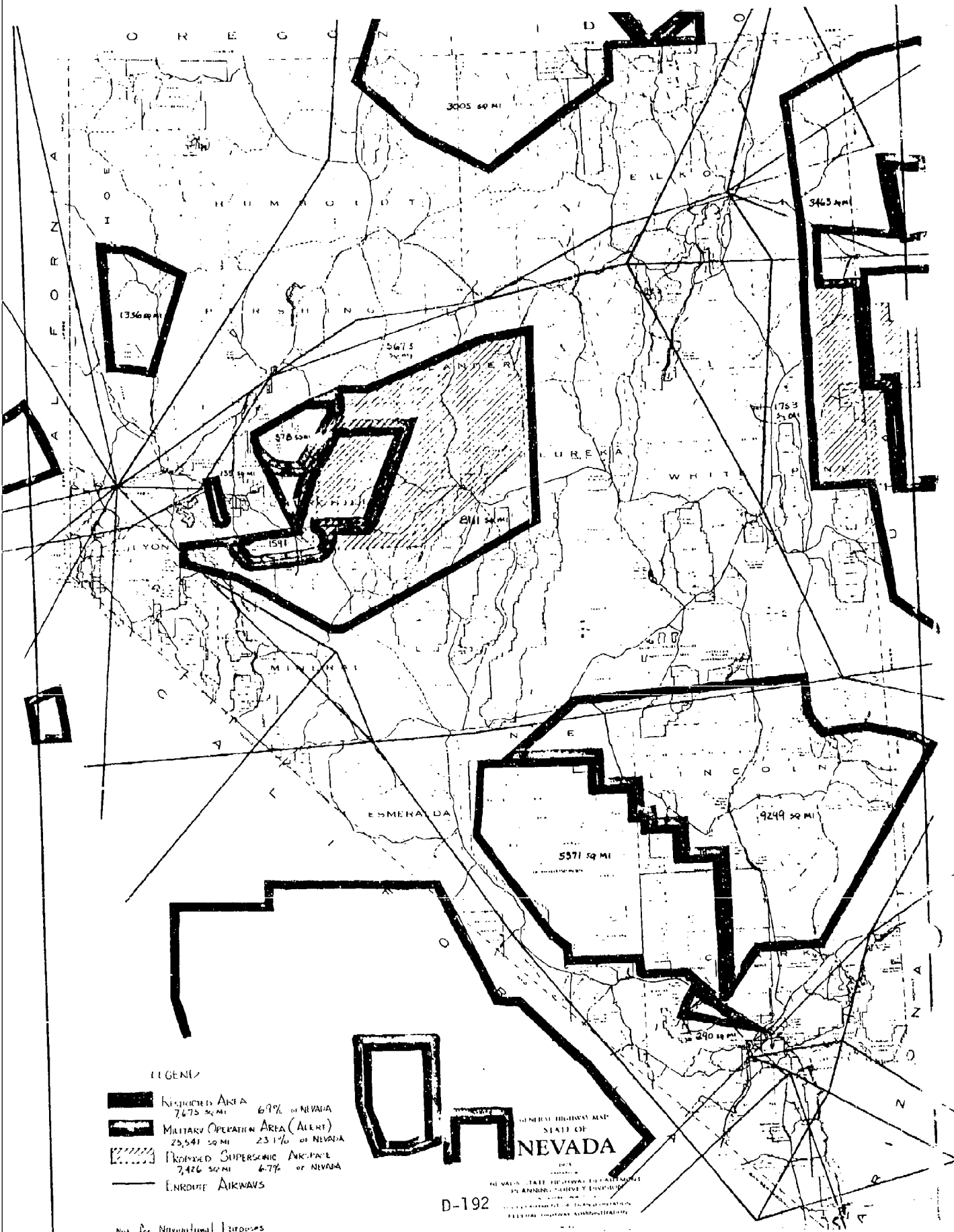
The Nevada map demonstrates the existing and proposed areas by function and existing airways. We feel this ably delineates the impact upon aviation in Nevada and the need for an air system plan which would meet the needs of Nevada and the wishes of the many military organizations.

Sincerely,

A. E. STONE
Director

AES:HEG:bb

Encl.


OREGON
IDAHO
HUMBOLDT
ELKO
PERSHING
LANDER
EUREKA
WHITE PINE
LYON
MINERAL
ESMERALDA
NYE
LINCOLN
3005 sq mi
3463 sq mi
1336 sq mi
5671 sq mi
578 sq mi
155 sq mi
1591
8111 sq mi
1753 sq mi
9249 sq mi
5371 sq mi
240 sq mi
LEGEND
RESTRICTED AREA 7475 sq mi 6.9% of NEVADA
MILITARY OPERATION AREA (ALERT) 25,541 sq mi 23.1% of NEVADA
PROPOSED SUPERSONIC AIRSPACE 7,426 sq mi 6.7% of NEVADA
ENROUTE AIRWAYS
Not For Navigational Purposes
GENERAL HIGHWAY MAP
STATE OF
NEVADA

Nevada Department Of Wildlife

WILLIAM A. MOLINI
DIRECTOR

RICHARD H. BRYAN
GOVERNOR

1100 VALLEY ROAD • P.O. BOX 10678 • RENO, NEVADA 89520-0022 • TELEPHONE (702) 784-6214

September 27, 1983

Ms. Linda Ryan, Director
Office of Community Services
1100 East William, Suite 109
Carson City, NV 89710

Dear Linda:

We appreciate the opportunity to review and comment on the Draft Environmental Impact Statement associated with the Gandy Range Extension and Adjacent Restricted Airspaces which was prepared by the Department of the Air Force (SAI NV #84300014). The document appears to have addressed those concerns which our agency identified in a letter dated September 30, 1980 which was written in response to a scoping process (SAI NV #81200025). Although we continue to have concerns relative to safety protective measures in areas of high aircraft use, we cannot address any firm conclusions which would support an opposition viewpoint toward the proposed action. 4

If you have any questions on the above or feel a need for further input at this time, please advise.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Patrick D. Coffin
Acting Director

RPM:pw

cc: Region II
Chief Pilot

Division of State Lands
State Land Office
State Land Use Planning Agency
(702) 885-4363

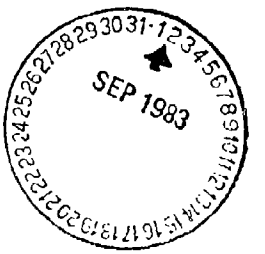
Address Reply to
Division of State Lands
201 S. Fall Street
Capitol Complex
Carson City, Nevada 89710

STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Division of State Lands

September 1, 1983



M E M O R A N D U M

TO: John Walker
Office of Community Services

FROM: Pamela B. Wilcox, Administrator

SUBJECT: Gandy Range Extension - SAI NV #84300014

We have no major objections to the proposed action, i.e., the converting of an existing Military Operations Area (MOA) to allow supersonic flight training. Our objections are to the larger question which is the federal government's, particularly the Department of Defense, blocking up vast areas for single purposes, and the inconveniences this causes citizens. Rough calculations indicate that about 30 percent of Nevada is covered by military restrictions or MOA's.

This is only one of several military airspace expansions that have been proposed in the past two years. The others are associated with Nellis Air Force Base and the Fallon Naval Air Station. We feel that there should be some statewide or regional (multi-state) plan that adequately allocates airspace for military, commercial and civilian private use.

This proposal is to block up a total of about 5870 square miles (1800 in Nevada) for military supersonic operations (including the Northern SFA, Southern SFA and the Gandy Range plus area). Although this proposal is for supersonic flight at over 5000 feet above ground, the restricted airspace is from ground level to and including 58,000 feet or eleven miles up. There is no analysis of other possible use of this airspace. 142

142

PBW:JHM/js

cc: Roland Westergard, Director

NEVADA

DIVISION OF STATE PARKS

MEMO

SEP 1 1983

TO Office of Community Services
Linda Ryan

FROM John Richardson

DATE 09/12/83

SUBJECT EIS - GANDY RANGE, HILL AIR FORCE BASE, UT

A quick review of the U.S.F.S. - EIS for the Gandy Range shows that there will not be any impact on either Cave Lake or Ward Willow Charcoal Ovens.

Current recreational use in the area tends toward dispersed recreational use on an individual or small group basis. These are activities where the values of unspoiled nature are deliberately sought. The noise created by sonic booms will probably be annoying to recreational users.

On page 22 the EIS eludes to the fact that pilots "will occasionally use mountains or mountain ranges for masking purposes." When this happens the pilots are flying considerably below the 5,000' level which will cause considerable annoyance to recreational users. 140

140

If the Hill Air Force pilots are anything like the Nellis pilots, we can expect flight below the 5,000 ft. level quite often. We currently have military planes flying over Beaver Dam, Kershaw-Ryan, Echo and Spring Valley often at the 100 - 200 ft. level. This is a considerable annoyance to all users.

If the military craft get out of their flight zone, Cave Lake and Ward Willow are within a few minutes. If this happens, we can expect recreational users to file complaints with Park staff.

4 We do not see any problems with the extended boundaries as long as the pilots fly at expected levels of altitude and at expected times (non-weekend). 4

JR:AN:em

RICHARD H. BRYAN
Governor

STATE OF NEVADA

ROLAND D. WESTERGARD
State Historic Preservation Officer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF HISTORIC PRESERVATION AND ARCHEOLOGY
201 S. Fall Street
Capitol Complex
Carson City, Nevada 89710
(702) 885-5138

October 13, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sir:

This letter regards the extension of a military operations area/air traffic control assigned airspace area (MOA/ATCAAA) for the Gandy Range in Nevada and Utah. The Division has completed review of the draft environmental impact statement. Our major concern over the extension of this range is with the effects of sonic booms on historic and archeological resources in the Nevada area.

4 Little is known about the cultural resources in the most eastern portions of Elko and White Pine Counties; few archeological, historical or architectural surveys have been conducted. Without knowing more about the cultural resources of the area, it is difficult to determine whether the increased number of sonic booms created over the area will have an effect on archeological sites such as rockshelters or historic sites such as rock-walled structures. At this time, reluctantly, it is the opinion of this office that the extension of the range will have "no effect" on properties of National Register quality in the Nevada portion of the area. 4

143 Native American consultation with Coshutes living on the Goshute Reservation is necessary to determine whether the extension will affect in any way their use of sacred sites or other locales of importance. This should be accomplished before the final draft of the EIS is published. 143

If you have any questions regarding these comments, please call us.

Sincerely,

Alice M Becker

ALICE M. BECKER
Staff Archeologist

AMB/lmw

rcvd 16 Dec

Nevada Cattlemen's Association
419 Railroad Street - Elko, Nevada 89801
(702) 738-9214

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Lee Carlton
Elko
E.L. (Ned) Eyre
Eureka

December 13, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sirs,

Enclosed for your consideration is Resolution 17 adopted by members of the Nevada Cattlemen's Association and the Nevada Wool Growers' Association at their annual joint convention. I believe the resolution is self-explanatory, but if you would like further explanation please let us know.

Sincerely,

Paul Bottari

Paul Bottari
Executive Secretary

PB/cm

Enclosure

D-197

RESOLUTION NO. 17
Environment and Water Committee

NEVADA CATTLEMEN'S ASSOCIATION AND
NEVADA WOOL GROWERS ASSOCIATION
JOINT CONVENTION
Ely, Nevada
November 16, 1983

WHEREAS, The United States Air Force has declared the need of a supersonic test and training range within useful flight time and distance of Hill A.F.B., Utah, and

WHEREAS, The proposed action will withdraw and restrict that airspace adjacent to the already extensive existing Military Operation Area in Northwestern Utah, and will also extend into eastern portions of Elko and White Pine Counties of Nevada, and

WHEREAS, Sonic booms are known to cause physical damage to property and serious health hazards to people and their livestock, and

WHEREAS, The closure will restrict all other aviation uses within the proposed area in a state already excessively burdened by restricted areas; therefore, be it

RESOLVED: That the Nevada Cattlemen's Association oppose this proposed action by the Air Force and FAA and urge their consideration of other alternatives.

Directed to: USAF Wright-Patterson Fld, Ohio
FAA, Reno, Nevada
Governor Richard Bryan
Nevada Congressional Delegation

Mr. Roman Arizabelaga,

Mr. Harold Chisholm,

Mr. Norman Frey,

Ms. Gladis Sexton,

One vacancy.

NEVADA PROSPECTORS ASSOCIATION, INC,

P.O. BOX, 94,

FALLON, NEVADA, 89406,

OFFICE OF THE PRESIDENT, Phone. 702/ 432/ 6231.

October, 9, 1983,

Hill Air force base,2849

ABG,DI EXXHill Air force base Utah, 84056,

Att.Ke[illegible]vis.

Land grab in Ne. Nevada,

If we wish to protest? Just what do you expect ,? We are vigirously protesting and further expect that the closing date be indefinately postponed for reason. The method used in this so calledNotification are very inedequate and time of equal of short notice,

We there fore request this closing date be indefinately postponed as We must get full information on the deteils and consider the lack of need from your position, It is noteable that these lockout's are never edequately or fully explained and the ruinous results are left for We the People to become acquainted with at some time in the future, much to late,

Thank you, H.R Conrad

H.R. Conrad, President

Chairman of board.

P.S. the continued yelp [redacted] from all Military, WAR WITH RUSSIA, is the large cause of most of our trouble with Russia,The constent introusion into the Soverign right's of respective Stateson the self generated supposedly for reasons not apparent to any concerned Citizen.

P.S. the continued yelp War with Russia, H.R.C.

COPIES TO

Certain responsable parties.

NEVADA WILDLIFE FEDERATION, INC.

An Affiliate of the National Wildlife Federation

820 EAST SAHARA AVENUE / LAS VEGAS, NEVADA 89104

October 30, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Sir:

4 After careful review of the Gandy Range Extension DEIS, the Nevada Wildlife Federation is strongly opposed to the proposal. We would be in favor of alternatives "b", "c", or"d" as addressed on page ii of the DEIS. 4

73 On page iv, the DEIS states, "Environmental impacts are considered minimal in all respects except the noise resulting from sonic boom activity". At a rate of 100 to 125 sonic booms per day (page ii, DEIS), the Federation feels that this is a significant impact on the environment. 73

147 The DEIS states on page v that, "Questions on long term protracted exposure and sublevel responses (of wildlife) remain to be studied". On page 46 of the DEIS we read, "One study indicated that sooty tern reproduction rates were severly reduced when the eggs were exposed to intense sonic booms...". The Federation wishes to point out that the proposed area is some of our finest deer winter range. What will the sonic booms do to the rut, and what effect will the stress of the booms have on the pregnant does? Will this stress result in a higher fawn mortality? The DEIS states on page 46, "the most delicate and sensitive behavior of animals is that associated with biological reproduction" 147

Also of importance to us is the fact that the valleys of the proposed area are among Nevada's finest trophy antelope habitat. Will the booms interfere with antelope reproduction, or will the booms make them more vulnerable to hunters?

CONSERVE OUR NATURAL RESOURCES

Quoting from the DEIS, page 57, which is a quote from the Wilderness Act of 1964, "Wilderness as described in the Act is to be an area untrammeled by man, with the imprint of man's work substantially unnoticable, and that has outstanding opportunities for solitude". We feel the proposal hardly fits the description of a wilderness area. The Goshute WSA (recommended for inclusion in the National Wilderness Preservation System in the May 1983 BLM DEIS as the preferred alternative) is totally included in the proposed operations area. The area is immediately adjacent to the South Pequop and Bluebell WSA's, which have received the same approval by BLM as the Goshute Peak WSA. 131 1

Quoting from the DEIS, page 59, "Recreational activities now taking place in the land area beneath the proposed supersonic flight airspace are of the outdoor...wilderness experience nature. ...activities include hunting, hiking, camping, etc. These are activities where the values of unspoiled nature are deliberately sought. Because of the remoteness of the area, the total number of people participating in these activities is expected to be small".

The Federation wishes to point out that in our arid and harsh state, areas of this nature are scarce. Our population is growing rapidly, perhaps the most rapidly in the nation, and recreational demands on this area will increase significantly. The White Pine Power Project DEIS of October 1983 sites the preferred location of the generating plant in North Steptoe Valley. This site is less than fifty miles from the proposed operations area. The W.P.P.P. DEIS states on page x, "At the peak of construction, the total population of White Pine County will be nearly 50% more than its projected level without W.P.P.P. The increased population will place an increased demand on... outdoor recreation". 4 4

The Federation wishes to discuss one final point, that being raptors. According to the BLM's Draft Wells Resource Management Plan and EIS, "Of major significance...in the Goshute WSA...5,000 to 6,000 raptors, including goshawks and golden and bald eagles

have been observed migrating south each fall". This does not include the resident raptors. What will be the effect of the supersonic booms on these raptors? Will the booms alter their forage supply? Will the booms disturb nesting, and reproduction?

Of at least equal importance, what will the effect of the raptors be on an F-16? Here at Nellis AFB, outside Las Vegas, a civilian falconer is employed to keep small birds off the flight line. Some range personnel have expressed concern that if wild horse populations are not controlled, starvation may attract carrion birds that could be a threat to jet aircraft. The operational altitude proposed for the supersonic operations area is certainly well within the soaring altitude of the raptors inhabiting the area.

147 147

At a replacement cost of $12 - 16,000,000, the loss of one or two F-16's to a raptor would certainly exceed the cost of any temporary duty assignments for training in a more suitable area both environmentally and tactically. While the purchase of an F-16 and payment for temporary duty might come from different budgets, the taxpayers are footing the bill.

148 148

Sincerely yours,

John A. Leitch, DDS
President

cc: John Young, Southern Vice-President, Nev. Wild. Fed.
Don Quilici, Northern Vice-President, " " "
Fred Wright, Legislative Chairman, " " "
Dale Gaskill, West. Reg. Exec, National Wildlife Federation
Rusty Zaunbrecher, Public Lands, " " "
Senator Chic Hecht
Senator Paul Laxalt
Representative Harry Reid
Representative Barbara Vucanovich
Governor Richard Bryan
Will Molini, Director, Nevada Department of Wildlife
Ed Spang, State Director, Bureau of Land Management

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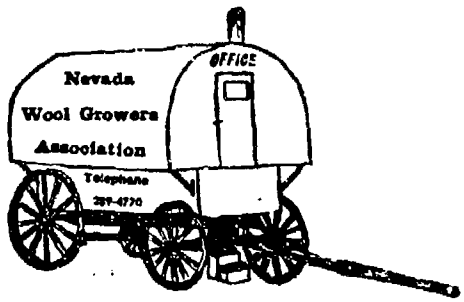


1100 E. 15 TH. ELY, NEVADA 89301

October 8, 1983

James F. Boatright
Environmental Planning
HQAFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Subject: Gandy Range Extension

At the Semi-annual meeting on September 24th, 1983 in Ely, Nevada, the Nevada Wool Growers voted unanimously to strongly oppose this extension.

We felt that the extension would be detrimental to the agricultural interests in eastern Nevada while not serving any real purpose.

The increased air space was questioned while the real benefit or advantage couldn't be justified.

We felt that the Air Force had enough air space in its present Gandy Range for any supersonic flight training which was needed to be conducted to allow for tests and training.

If you have any questions concerning our position, please feel free to contact us.

149

Sincerely,

Robert Belzarena

Robert Belzarena
President

RB/vj

November 21, 1983

Dear Sirs,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly** opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Walter L. Norman
Ronna Norman
Pleasant Valley,
Uvada, Utah & Nevada

D-204

December 20, 1983

Environmental Planning
HQ AFLC/DEPV
Wright Patterson A.F.B., Ohio 45433

RE: Draft Environmental Impact Statement, Gandy Range Extension

Gentlemen:

4 The Board of Directors of the Ogden Area Chamber of Commerce would like to go on record as supporting the proposal to extend the supersonic operating area of the Gandy Training Range. We have been briefed on the proposed changes and wish to make the following observations: 4

1. HILL AIR FORCE BASE has been able to develop complimentary logistic and tactical missions because of the close proximity of the Utah Test and Training Range. Quite simply, if the tactical mission cannot be conducted satisfactorily in existing air space, the mission will be located elsewhere. Such action would create a far greater socio-economic impact among the thousands of people along the Wasatch Front who depend on the base for their existence.

2. We do not believe the negative comment offered at public hearings is representative of the greater majority. Hill Air Force Base has been a dedicated community partner in Utah for more than forty years. Any innuendo that the Air Force is dishonest or insensitive should be discounted as emotional and political.

3. Considering the current tensions in the world, the Ogden Chamber Board feels that the possible impact on 350 people spread over 3,030 square miles is a necessary concession to maintaining a combat-ready tactical air force.

Sincerely,

Steve Lawson
Executive Vice President

SL/hw

D-205
2307 Washington Blvd. • Ogden, Utah 84401 • Phone (801) 621-8300

recvd 15 Nov '83

Nov. 4, 1983

We the people living in the Deep Creek Mountain area of Pleasant Valley, Gandy, Partoun, Trout Creek, and Callao protest and oppose the Air Force proposal to use this area of 85 miles long by 25 miles wide for testing and training of the F-16 jet fighter planes. The area is not unpopulated! This area has 18 ranches, 28 additional homes and a total of 182 people. 1

Studies have also shown that unborn and small children suffer both hearing impairment and loss from the loud sonic booms. Neither human beings nor livestock can adjust to the loud, unexpected sonic booms made by the F-16 jet fighters traveling at supersonic speeds. 6, 33, 36

The livelehood from ranching is threatened as studies have proven that livestock miscarriages occur as a result of the loud explosive concussion made by the fighter planes. The sonic booms would disrupt and hinder the utilization of our grazing rights throughtout this area. 6, 33, 36

We feel the F-16 fighter testing and training should take place in unpopulated areas and strongly oppose the plan to use the Utah-Nevada area as the proposed test and training site.

E X Nder Trout Creek, Utah 84077
Mrs Renee Trout Creek, Ut 84077
Alder
Dana Alder Trout Creek, Ut "
Lora Anderson Partoun, Utah
Kathryn Abbott Partoun, Utah
Cindy K Jones Partoun, Utah 84077
Karen L Bjorkman Partoun, Utah "
Steven T Bjorkman Partoun, Utah "
JoAnn H Knight Partoun Utah 84077
Barbara Morrison Pleasant Valley Ut 84077
Mike Watson Pleasant Valley Ut
Willard Henrod Pleasant Valley Ut 84077
Darin M Rawlings Partoun, Utah
Curtis Bishop Ubapah Utah 84039
Merle Henriod - Uvada - Via Wendover, Ut 84083
Willard Henriod Uvada D-2 Via Wendover Ut 84083

nis Timm	Callao. Utah
Timm	Callao, Utah
ny Bates	Hendrays Creek Ranch Utah
Bates	Hendry's Creek Ranch, Utah
ne Harris	Pleasant Valley - Uvada - via Wendover, Ut
E Harris	Pleasant Valley utah

Frances Pedunce	Gandy, Utah 84728
Ronald C Betts	Gandy, Utah 84728
Marlene Bates	Gandy, Utah 84728
Festa Sims	Gandy, Utah 84728
John Sims	
Nathan Hale	Trout Creek
Carol Lewis	Trout Creek
Kathy Goodwin	Partoun 84077
Rita Lewis	Partoun 84077
Brent L. Goodwin	Partoun 84077
Wesley Lewis	Partoun 84077
Barbara Goodwin	Partoun 84077
Jeanne R. Eldridge	Partoun 84077
George T Rawlings	Partoun, Utah
Kelly C Rawlings	Partoun, Utah

We the people living in the Deep Creek Mountain area of Pleasant Valley, Gandy, Partoun, Trout Creek, and Callao protest and oppose the Air Force proposal to use this area of 85 miles long by 25 miles wide for testing and training of the F-16 jet fighter planes. The area is not unpopulated! This area has 18 ranches, 28 additional homes and a total of 182 people.

Studies have also shown that unborn and small children suffer both hearing impairment and loss from the loud sonic booms. Neither human beings nor livestock can adjust to the loud, unexpected sonic booms made by the F-16 jet fighters traveling at supersonic speeds.

The livelehood from ranching is threatened as studies have proven that livestock miscarriages occur as a result of the loud explosive concussion made by the fighter planes. The sonic booms would disrupt and hinder the utilization of our grazing rights throughtout this area.

We feel the F-16 fighter testing and training should take place in unpopulated areas and strongly oppose the plan to use the Utah-Nevada area as the proposed test and training site.

David K. Bagley — Callao, Utah 84083
Ronnie C. Bagley — Callao, Utah 84083
Donna Bagley — Callao, Utah 84083
Cecil Garland — Callao Ut 84083
Annette H. Garland — Callao Ut. 84083
Cora Bagley — Callao, Ut. 84083
Commercial Fish Cart 528643858
Richard L. Gunnell — Callao Ut. 84083
CALLAO UT 84083
Callao, Utah
Terry Sims — Callao, Utah
Tamara Sims — Callao, Utah.
Raymond L. Durrant — (Callao, Utah.
Kelly Moreland — Callao, Utah.
Lil C. Jensen — Callao, Utah
Gary L. Williams — Callao, Utah
Kim D. Timms — Callao, Utah 84083

D-208

Colette Rosmond	Callao, Utah
Cecil R. Bates	Callao, Utah
Myrna Bates	Callao, Utah
Dick Le Layland	Callao, Utah
Lavjean Layland	Callao, Utah

d1412

D.H.

Oct. 21, 1983

Representative Harry Reed
1711 Longworth Office Bldg.
Washington, D. C. 20515

Dear Representative Reed:

Re: Mt. Rose Ramp Lane Extension

I am very concerned about the proposed e[redacted] the [redacted] adverse economic effects on the agriculture industries which are vital to our depressed economy. Recreation would [illegible] be offset by [illegible] imposed on the use of the area.

149

149

We already have almost daily smog [illegible] that settle the valley.

It is my hope that you will consider my opposition to this proposed extension.

Sincerely,

Mrs. Dorothy L. Phillips
Councilwoman
City of Ely
P.O. Box 297
Ely, Nev. 89301

TO: ENVIRONMENTAL PLANNING,
HQ AFLC-DEPV,
WRIGHT-PATTERSON AFB, OH 45433

Date 10/2/83

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

Naomi Lovely
Signature

875 Sage Lane
Address
Fallon, NV 89406

Congress
of the
United States
House of Representatives

HARRY REID
NEVADA

COMMITTEES:
FOREIGN AFFAIRS
SCIENCE AND TECHNOLOGY
TRAVEL AND TOURISM CAUCUS
SELECT COMMITTEE ON AGING

November 21, 1983

Colonel Albert L. Barbero
Office of Legislative Liaison
Department of the Air Force
The Pentagon
Washington, D.C. 20330

Dear Colonel Barbero:

Enclosed are copies of some of the many letters my office has received concerning the Draft Environmental Impact Statement (DEIS) on supersonic flight operations in the Gandy Military Operations Area (MOA).

I feel that those responding have raised very legitimate concerns, particularly with respect to the effects of sonic booms on wildlife and the risk to pilots and planes posed by the abundance of large birds in the flight area.

I am glad to see that the Air Force has scheduled hearings to allow the public an opportunity to voice their concerns directly to those responsible for the DEIS. I would appreciate it if you could keep me informed of further developments.

Thank you for your cooperation in this matter.

With all best wishes,

Sincerely,

HARRY REID
Member of Congress

HR:dcm

Enclosure

*All letters transmitted are included in comments.

☒ WASHINGTON OFFICE: 1711 LONGWORTH HOUSE OFFICE BUILDING, WASHINGTON, D.C. 20515, (202) 225-6965
☐ LAS VEGAS OFFICE: 420 FEDERAL BUILDING, 300 LAS VEGAS BLVD., SO., LAS VEGAS, NEVADA 89101, (702) 385-6545
☐ HENDERSON/BOULDER CITY OFFICE: 201 LEAD STREET, ROOM 26, HENDERSON, NEVADA 89015, (702) 565-0057

JOSEPH H. ROBERTSON
920 Evans Ave
Reno, NV 89512

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH
45433

10/11/83

Dear Addressee

Re - supersonic flights in E. Nevada.

Inasmuch as the Goshute Range is an important migratory route for about 2 months - Aug/Oct, I request time & research on the effect of your proposed operation on raptors such as eagles, osprays & falcons. On one day, 9/14/83, over 900 raptors were counted flying south.

Your nupaid statement should not dismiss this for lack of information.

Respectfully
J H Robertson

37 37

Date.
10/12/83

To: Environmental Planning
HQ AFLC/ DEPV
Wright-Patterson AFB, Ohio 45433

FROM: Daniel Rosen
Box 1248
Zephyr Cove, NV 89448

I Recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank You,

Sincerely,

5

5

PA
OOMC/CC
JA
DE
6501 RANGE

November 21, 1983

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Amy Sabey

Cedar, Utah

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as **strongly opposing** the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Cora Dabey

D-216

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Dorothy Sadler

November 21, 1983

Dear

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Robert Sale

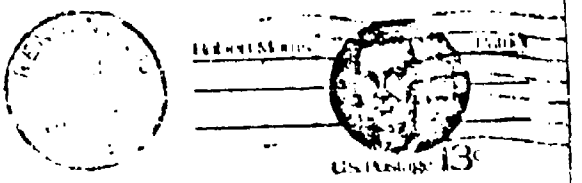
TO: ENVIRONMENTAL PLANNING, HQ AFLC/DEPV, WRIGHT-PATTERSON AFB, OH 45433 DATE 10/13

FROM: Leonard Senazaro, 105 E NV. Street, N.V. Hills 217 Reno, NV (Name, address)

5 I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from Oct. 14 to Dec. 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely, 6

Leonard Senazaro
Signature

Fai Schwarzenberg
708 Kittiwake St
Livermore CA 94550



Environmental Planning
HQ AFLC / DEPV
Wright-Patterson AFB
OH 45433

© USPS 1981

Oct 11, 1983.

Dear Sir:

I learned recently of the proposal to turn part of Eastern Nevada [illegible] area. I am writing to [illegible] a 60 day extension [illegible] from Oct 14 to Dec 14. 5

In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. 6

Thank you.

Sincerely,

Fai Schwarzenberg

October 12, 1983

John Shanahan
P.O. Box 153
Eureka NV 89316

Dear Sir

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. Iam writing to formally request a 60 day extension in the commert period, from Oct 14 to Dec 14. In addition, Iam requesting that the Air Force hold public hearing on the propsal in Nevada and Utah.

The Air Force came out to our house and had some driling done and made a fault and poisoned our stock our family the water is now no good we are in town and our Health is very bad and we want a ranch back and see of we can get some help for us. They do not keep ther word and do not take care or the people they harm.

15

Sincerely Yours

John Shanahan

rec'd 13 Dec

Shoshone Joint Housing Authority
P.O. Box 1199 - Ely, Nevada 89301 - Telephone (702) 289-2319

December 1, 1983

HeadQuarters
AFLC-DEPV
Wright Patterson,
Air Force Base, Ohio
45433

Dear Sirs;

The Shoshone Joint Housing Authority in conjunction with our six Board of Commissioners hereby submit our opposition to the Air Force's plan to extend its supersonic flight airspace over the Nevada/Utah border. This would adversely affect our development of 14 units of housing to be built on the Goshute Indian Reservation in the Spring of 84. The homes to be built at Goshute will be pre-fab modular homes. The units will be brought to Goshute in two halves and assembled at the sites. The sonic booms from a jet flying at 5,000 feet could be harmful to the homes and the foundations of concrete that easily crack when it is fresh, or old.

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80

The Goshutes Reservation will be swallowed up by the supersonic flight airspace proposed by the Air Force. The Goshute Indians have limited industry now, and will have an even harder time attracting new industry with up to "38 sonic-booms" per day. These booms will also have an adverse effect on their livestock, and hamper their limited means of providing for their own families and elderly tribal members.

151

151

We ask you to reconsider the plight of the Goshute Indians without having to deal with sonic booms approximately three to four times per hour, and relocate your airspace to an unpopulated area.

Your consideration and cooperation in this matter will truly be appreciated !

Sincerely,

Rick Trevena

Rick Trevena, Director

cc: Board of Commissioners
Senator Laxalt

D-222

rcvd 20 Dec
PM 16 Nov

SIERRA CLUB

Toiyabe Chapter – Nevada and Eastern California

PLEASE REPLY TO: ☐ _____

☐ GREAT BASIN GROUP
P.O. Box 8096
University Station
Reno, Nevada 89507

☐ LAS VEGAS GROUP
P.O. Box 19777
Las Vegas, Nevada 89119

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB
Ohio 45433

Dec. 14, 1983

Dear Sir/Madam:

The Executive Committee of the Toiyabe Chapter of the Sierra Club at its October 15, 1983 meeting passed the following resolution:

> Resolved, that the Toiyabe Chapter of the Sierra Club opposes establishment of additional restricted airspace by the USAF northeast of Ely, Nevada for the purposes of conducting supersonic flight training.

114 131

The EIS on the establishment of the Gandy Range Extension fails to adequatley consider the impacts on the Wilderness Study Areas and does not even mention two that are directly impacted, the Goshute Peak WSA and the Bluebell WSA, both of which are in Nevada. Also, the Goshute Canyon WSA and the South Pequop WSA are both very close to the proposed area. Finally, the Mt. Moriah USFS Further Planning area (soon to be recommended for Wilderness designation) is very close to the proposed area.

114 131

152

The Nevada wilderness experience is one of unmatched solitude. There exists very few areas in the lower 48 states that offer the peace and tranquillity that exists in Eastern Nevada. Sonic booms will effectively destroy the sense of place presently available in the withdrawal region. Military land and air withdrawals are chipping away at the remote recreational and wildlife areas in Nevada. We strongly oppose this incremental process and strongly oppose this withdrawal.

152

7

We also feel that the impacts on wildlife are substantially underestimated. While animals will not drop dead immediately when experiencing a sonic boom, the Air Force has not presented conclusive evidence that biological shifts will not occur which result in species depletion over the long term. Is the Air Force going to monitor avian and mammalian populations over the long term?

7

The Air Force continues to think that the Great Basin is waste land suited only for their use. This attitude is most unfortunate since it adversely and unfairly affects the people and environment of the Great Basin.

Sincerely,

Glenn C. Miller, Chairman
Toiyabe Chapter of the Sierra Club

D-223

November 21, 1983

Dear Senator Garn,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

John Sims

November 21, 1983

To: Commanding Officer, Hill Air Force Base

Re: Proposed Testing and Training Areas for the F-16

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people. 1

I want to go on record as strongly opposing the proposed use of the new super-sonic testing areas.

Sincerely,

Linda C. Lowe
Gandy Rt.
Hanover UT 84728

1

D-225

1

211794

November 21, 1983

RECEIVED
SENATOR GARN

NOV 29 12 05 AM '83

Dear Senator Garn,

I would like to make known to you that I oppose the proposed Air Force use of this area for testing and training the F-16.

I am concerned about the physical and mental health of my family. I am concerned about the possible detrimental effects on our environment and livelihood. I am concerned about the structural damage of our homes, churches, and school.

This area is populated. We have a public school with an enrollment of fifty (50). In the vicinity affected by the Southern ellipse, the population of the combined towns of Partoun, Uvada, Gandy, and Trout Creek totals one hundred and twenty (120). Of the one hundred and twenty (120) people in the valley, the DEIS counted only fifteen (15) people.

I want to go on record as strongly opposing the proposed use of the new supersonic testing areas.

I appeal to you as my representative to use your influence to try and stop these proposed plans.

Sincerely,

Lucia C Sanz
Gandy St.
Garrison Ut. 84728

D-226

TO: ENVIRONMENTAL PLANNING,
HQ AFLC/DEPV,
WRIGHT-PATTERSON AFB, OH 45433

Date 11 OCT 83

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. ~~I am writing to formally request a 30 day extension in the comment period, from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah.~~ Thank you. Sincerely,

KEEP UP THE GOOD WORK. ANY ASSISTANCE REQUIRED WILL BE PROVIDED.

John Smith
Signature

2677 RICE ROAD
Address

FALLON, NEVADA 89406

4

TO: ENVIRONMENTAL PLANNING,
HQ AFLC-DEPV,
WRIGHT-PATTERSON AFB, OH 45433

Date 10/11/83

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

P.K. STEVENSON
Signature

4020 RENO HWY
FALLON, NV 89406
Address

TO: ENVIRONMENTAL PLANNING,
HQ AFLC-DEPV,
WRIGHT-PATTERSON AFB, OH 45433

Date 10/19/83

I recently learned of the proposal to turn part of eastern Nevada into a supersonic operations area. I am writing to formally request a 60 day extension in the comment period, from October 14 to December 14. In addition, I am requesting that the Air Force hold public hearings on the proposal in Nevada and Utah. Thank you. Sincerely,

5

Anne Stilwell
Signature

P.O. Box 10187
Address

Tonopah, NV 89049

1685 Kings Row
Reno, NV 89503
October 27, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Re: Proposed Supersonic Operations Area in Western Utah and Eastern Nevada

Dear USAF:

I recently learned from a friend about a supersonic operations area in Eastern Nevada proposed by the USAF. There has been no local press coverage on the proposal. I wonder how Nevadans are supposed to find out about such projects in order to comment on them. What opportunities has the USAF provided Nevadans for notice and involvement? 5

5 Although my comments don't meet the October 14 deadline, I hope you will accept them and extend the deadline until December 14 so others will have a chance to comment. Also, please schedule public hearings in Nevada on the proposal during the extended comment period.

Please send a copy of the Draft EIS to:

Rose Strickland
1685 Kings Row
Reno, NV 89503

From what I was told about the proposed SOA, I would like to ask the following questions about the proposal:

1. Why didn't the DEIS analyze the impacts of the SOA on the proposed wilderness areas in Eastern Nevada?:

BLM	- Goshute Peak WSA
	South Pequop WSA
	Bluebell WSA
USFS	- Mt. Moriah Further Planning Area
	Schell Creeks - defacto wilderness
	Wheeler Peak Scenic Area
NPS	- Lehman Caves National Monument

119 119

8 2. How much land and air space in Nevada is already subjected to military restrictions? How will the proposal disrupt current uses of air space over Eastern Nevada? Why didn't the DEIS consider an alternative of using air space already restricted for military purposes for USAF purposes? 8

37 3. What are the short-term and long-term effects of increased sonic booms on the health of residents and visitors and of animals, both domestic and wild? Goshute Mountains are an important raptor migration area. Will increased sonic booms 37

disrupt raptor habitat and use of the area?

217, 246

4. Eastern Nevada is occupied, although sparsely, both by permanent residents and by visitors. What are the costs of the disruption of the lives of residents as well as visitors by the increased frequency of sonic booms? Does the USAF consider these costs less than those of a more densely populated area?

217, 246

Perhaps I will find the answers to some of these questions when I have an opportunity to fully review the DEIS. If the areas of concern being raised by the public are not adequately addressed in the DEIS, would the USAF develop a supplemental EIS?

Thank you for considering my concerns.

Sincerely,

Rose Strickland

Assemblyman
Washoe County No. 28
920 Gordon Avenue
Reno, Nevada 89509
Home 322-2095

COMMITTEES
Vice-Chairman
Economic Development, Tourism, and Mining
Member
Judiciary
Health and Welfare
Transportation

Nevada Legislature

SIXTY-SECOND SESSION

October 12th

Dear Sirs,

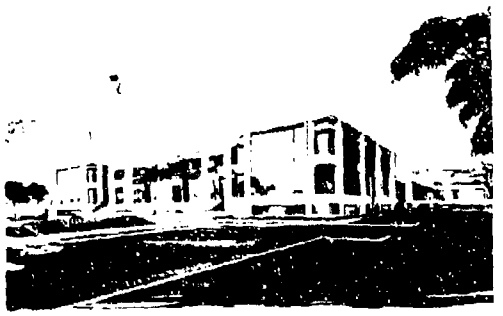
I have just learned of your plans to restrict more air space over eastern Nevada to create a superzone operations area. I would personally like to voice my own opposition to this plan.

In addition I would like to formally request a 60 day extension on the period allowed for comment from October 14th to December 14th. There are many citizens who I am sure would like to address this issue.

Thank you for your consideration.

Sincerely,

Conway Swain



Tooele County

State of Utah

Home of the World Famous Bonneville Salt Flats

47 South Main Street, Tooele, Utah 84074

November 17, 1983

COMMISSIONERS

Charles Stromberg, Chairman
Reed Russell
Lee Bracken

OFFICIALS

Clerk-Auditor
Dennis D. Ewing

Recorder
Donna McKendrick

Attorney
Ronald L. Hilton

Sheriff
Marion S. Carter

Treasurer
Grant L. Pendleton

Assessor
Anne R. Dunyon

Surveyor
Donald Rosenberg

Environmental Planning
Hp. AFLC/DEPV
Wright Patterson AFB
Dayton, Ohio 45433

Dear Sir:

The Tooele County Board of Commissioners strongly support and endorse the enclosed letter.

We would appreciate your immediate consideration regarding this matter.

Sincerely,

Charles Stromberg

CHARLES STROMBERG, Chairman
Tooele County Commission

CS/pl

cc: Sen. Jake Garn
Rep. James B. Hansen

*Attached letter from the Bateman's included elsewhere.

655 Kirman Avenue
Reno, Nevada 89502
October 9, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB Ohio 45433

Gentlemen:

Sometimes air traffic in Reno is diverted to other than regular landing strips, and even for a short time the noise is unbearable. What those people in eastern Nevada would have to endure if hundreds of planes per month are going to be flying over them at supersonic speeds is unthinkable. It would be enough to drive them insane.

5 I think there should be hearings over the state to see how they feel about this enlargement of the Air Force operations area. 5

Will Nevada ever be free of bombardment os some sort by our own government?

Very truly yours,

Juanita Tumbleson

Mrs. Juanita Tumbleson

Howard Turley
Dixie Ste
Fallon, Nevada
Oct. 10 - 1983

Enviornmental Planning
EC-AFL-EIPP.
Wright Patterson, Ohio
45433

Gentlemen,

I take this opportunity to write you people whose task it is to be conserned about the enviornment in which we live, to appraise you of what the military plans are for the desecration of the enviornment of the state of Nevada. With their supersonic low flying Aircraft envirions of this area is to be bombarded by hundreds of sonic booms per day, with little or no thought as to life here will be affected. 53 16

A matter of record is the fact that eighty seven percent of the total land area in Nevada is Federal Land, most of which is waste land and most inhospitable to man and beast. There are hundreds of square miles of just plain old salt flats and sand dunes where there is no water and nothing will grow in the way of plant life beneficial to either man or beast. But for some obscure reason the Military refuses to make use of these wasted lands for their training purposes. For instance the Navy Department has moved it's training facilities into the Fallon area, which is one of the few oasis that exists on the Great American Desert, here they want to carry out their deadly war games right over the heads of people with a total disregard of how their interests are affected.

It is hard for some of us to believe that Americans could possibly be subjected to indignities of this magnitude. But such is the case and we have no recourse to even common sense of our officials. Our Senator Laxalt has informed us that we would have to learn to co-exist with the military, but unfortunately for us he has no suggestions as to how we are to manage this.

There is a Law that protects the wild horses that roam the western ranges from harassment by aircraft.Isn't it flattering to us to realize that the wild horse is worth that much more to our Government than are the people.

We understand that you Enviornmental people are involved in whether or not the Military plans are to be finalized here.We are hoping that you will give some consideration to the plight of the people living here.At least we should be paid for our property,which would enable us to remove ourselves from the danger zone.

Respectfully Yours

Howard Turley
Rancher, Miner
Fallon, Nevada 89406

rcvd. 20
P.m 16

STATE OF UTAH

SCOTT M. MATHESON
GOVERNOR

OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

December 13, 1983

Major General Marc C. Reynolds
Commander Ogden Air Logistics Center
Hill Air Force Base, Utah 84056

Dear General Reynolds:

The Resource Development Coordinating Committee has reviewed the Draft Environmental Statement entitled "Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training". The attached comments address specific sections of the DEIS. From the comments, however, there are a number of important points that deserve particular attention. They include:

54 1. Worst Case Analysis: A careful reading of the DEIS suggests that the "worst case scenario" appears to be much closer to the intentions of the Department of Defense than the level of activity identified as the proposed action. Accordingly, the DEIS should be republished with the proposed action defined in a fashion that acknowledges that the worst case scenario is the proposal. 154

155 2. Consideration of Alternatives: The state of Utah is disappointed that many of the other promising alternatives were excluded without additional analysis. In particular, the alternatives of using already restricted airspaces R-6404, R-6405, and R-6402 were excluded with virtually no discussion, on the basis that they are too small. However, it is apparent that only portions of the Gandy MOA are regularly used under the proposal. When the largely unused portions are compared with the area proposed for expansion, it is apparent that it is not of a materially different size than some of the other alternatives. Thus, dismissal of these alternatives on the basis of size is inappropriate. If there is a basis for excluding the other alternatives discussed, that basis should be fully and completely set out in the environmental impact statement. 155

156 3. Deep Creek Mountains: A related issue concerns the Deep Creek Mountains. The DEIS repeatedly notes that the Deep Creek Mountains will be avoided or are not suitable for inclusion in supersonic testing due to their physical characteristics. If this is the case, they should be excluded from the proposal or the proposed action should be defined in a way that it is clear under what specific circumstances flights will be permitted in the vicinity of the Deep Creek Mountains. 156

157 4. Adequacy of research data and discussion: The state is generally concerned that the research data utilized to support the conclusion and discussion of environmental impacts is out of date. Most of the studies relied upon were conducted in the 1960's. Because little was known about the impacts of supersonic flight in the 1960's, it is apparent that such studies could be successsfully updated today. In addition, the DEIS virtually fails to deal with the environmental impacts of a marked increase in subsonic activity. This is true with respect to environmental impacts on humans, wildlife, and recreation. 157

158 5. HUS Arena: The DEIS continually refers to the HUS (HAMOTS Upgrading System) Arena that is proposed to be established. However, before the HUS Arena can be used a baseline against which to measure impacts it needs to be a more concrete, identifiable, and certain proposition. 158

159 6. Goshute Indian Reservation: Finally, the state of Utah is very concerned about the lack of consideration given to the residents of the Goshute Indian Reservation. The DEIS almost casually dismisses the option of excluding the Indian Reservation from any expanded supersonic area, reasoning that there are only 150 Goshutes. This demonstrates an insensitivity to the Goshute Tribal members and way of life guaranteed by federal treaty obligations, an insensitivity which I cannot endorse. 159

We trust that you will consider our comments carefully as you prepare the final EIS. The state of Utah feels that the proposal needs to take into account the needs of the citizens of our state as well as the goals of the Department of Defense.

In conclusion, this proposal raises more concerns than it adequately considers. Based upon this review it is my opinion that the DEIS itself provides a basis for reasonable objections to the proposal and fails to provide a complete and adequate assessment of the possible impacts.

Sincerely,

Governor

SMM:mbz

cc: Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

SPECIFIC COMMENTS
Draft Environmental Impact Statement
Establishment of the Gandy Range Extension
and Adjacent Restricted Airspace as as
Area for Supersonic Flight Training

1.1.2 Utah Test and Training Range:

> ...[t]he HAMOTS (High accuracy Multiple Object Tracking System) sites to be picked for upgrading will be those that can best take advantage of (the) existing supersonic flight airspace. This instrumentation is being proposed under a program known as the HAMOTS Upgrading System (HUS).(page 3)

Since the HUS system is not in place it is inappropriate to refer to its location throughout the document without in each instance noting that it is simply a proposal. In addition, as long as it remains a proposal, it should not be used as a factor favoring the location of the proposed supersonic airspace. 41 41

Figure 2 (page 4) depicts the optimum training range of 100 nautical miles from Hill Air Force Base. The DEIS states that:

> Although outside the 100 NM radius, the Gandy Range Extension is being proposed as a supersonic flight airspace bacause it is close enough that the extra distance is considered an acceptable trade off when compared to the alternatives. (page 7)

We disagree that this trade off which would result in additional impacts on the communities below the airspace is acceptable, and question the need for additional airspace. If additional supersonic airspace is a critical need, it appears that R-6404, R-6405, or R-6402, all within the preferrred 100 NM radius and already designated as restricted airspace, would be better choices. The final EIS should more fully explain why these alternatives were rejected. 160 160 1

1.2.3 Special Tests and Exercises: The description of Red Flag Exercises indicates that:

Each of these exercises involved composite missions of 50 to 60 aircraft simulating realistic air combat and lasted about 28 days. All Red Flag missions are scheduled in supersonic flight airspace.(page 8)

161 This increased intensity of flights over the proposed airspace is not fully addressed as an adoitional impact on the communities and special uses 161

below.

II. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1.1 Proposal:

Because of their shape and size, other aircraft may create sonic booms of greater intensity, but since a vast majority of the aircraft training involving supersonic speeds will be by F-16 aircraft, characterisitics of this aircraft will be used throughout this document to evaluate the impact of the proposed action. (page 9)

In addition, on page 11 it is stated that:

"Since the F-15 and F-16 use similar air-to-air training scenarios and are similar in shape, the results of the F-15 will be used for the F-16 in this document."

More precise justification for using this comparison is not offered in the DEIS. Therefore, it is inappropriate to use the results of the 1980 report 162 "Development of C-weighted Day-Night Average Sound Level Contours for F-15 Air 162 Combat Maneuvering Areas" as a basis for flight performance results of the F-16 in the DEIS. Nor is the comparision of the F-15 to all other anticipated aircraft an adequate comparison. We would expect descriptions of other 44 "anticipated aircraft" to be included in the DEIS to forecast all expected 44 impacts.

159 Figure 4 on page 10 shows that the proposal surrounds the Goshute Indian Reservation. This is highly objectionable and the state supports the Goshutes opposition to the Air Force proposal. 159

> The figure of 850 to 1050 aircraft going supersonic per month in this airspace is the maximum anticipated. Existing supersonic flight airspace over DoD property in Utah can handle a portion of the traininng requirements and will be used to the fullest extent possible. If any F-16 sorties are accomplished over DoD property, the number accomplished in the proposed supersonic flight airspace will decrease accordingly. However, the airspace over restricted property is used heavily for daily training involving ground targets. Also, this area is normally scheduled for special exercises and development tests which are occuring on an increasingly frequent basis. Therefore, should the proposed airspace be approved for supersonic flight training, it is anticipated that maximum usage will occur frequently. (page 11)

154 This again demonstrates that the worst case scenario is to be expected to occur "frequently". Our review of the DEIS demonstrates that the "worst case scenario" is a more likely scenario than the "proposed action". 154

2.1.3.1 Transition Training: It is noted that, within the Gandy MOA now designated as subsonic with a floor of 100 feet AGL:

> Effective training is further degraded because a great deal of the pilot's attention must be devoted to restricting the aircraft to subsonic airspeeds. Since pilots must continually reference the cockpit airspeed indicator, concentration on the specific mission learning objectives is impeded. (page 13)

163 It is likely that this would also be the case for a pilot checking his instruments to ensure that he does not violate the minimum supersonic flight level of 5,000 feet AGL. If for this reason the flight training in this area will be impaired the DEIS should state that fact. 163

2.1.3.4 Dissimilar Air Combat Tactics: This activity is described (page 15) as involving 4 to 8 aircraft employing combat tactics currently conducted

above DoD land. The previously mentioned Red Flag exercises and this activity 164
164 are intense flight maneuvers that are not adequately addressed as an impact on
the communities and other uses in this area.

2.1.4 Quantities of Proposed Training:

A review of the DEIS with respect to quantities of training flights demonstrates that the impacts of the proposed action will be those of the worst case scenario. For example, the DEIS states:

> At times, scheduling air-to-air sorties for this area will continue to conflict with special exercises, research and developments projects, and the 956 monthly F-16 air-to-ground sorties, all three of which must be scheduled for airspace over DoD controlled land. (page 15)

The distribution of flights is reported as 719 F-16 air-to air sorties in the proposed airspace with the remaining 450 in airspace over DoD land already approved for supersonic flight. The DEIS also notes:

> However, when conflicts arise over scheduling operations in airspace over DoD owned land, part or all of the 450 air-to air sorties normally performed there will be moved to the proposed airspace. When all sorties are scheduled for the proposed airspace, the worst condition exists of 1169 air-to-air sorties with 90% of these, or about 1050, sorties involving supersonic speeds. (page 16)

The DEIS continues:

> The existing supersonic flight airspace over the southern range will frequently be overloaded with tests, exercises and air-to-ground sorties. In these cases, particularly if approved for supersonic flights, the proposed supersonic flight airspace will be scheduled for most of the 388 TFW's air-to-air sorties. With all 1169 monthly air-to-air sorties being accomplished in the new supersonic flight airspace, it is estimated that about 75 percent will be accomplished in airspace that is within the HUS Arena. (page 19)

Again, the conclusion to be drawn from these statements is that we could

expect the worst case scenario will occur "frequently".

In fact, this "worst case scenario" does not include many possible impacts. For example, on page 16 it is stated that an "additional factor" to be considered for future operations is that the 419 TFW anticipates changing aircraft. F-105 aircraft of the 419 TFW will be replaced with the F-16.

> When the 419 TFW changes aircraft, it is anticipated that the number of aircraft and the volume of training may eventually increase over present levels, up to about 24 sorties per day or 120 per week,... these 419 TFW sorties may increase the total number of supersonic flights out of Hill AFB by about 24%. (page 16) (emphasis added)

165 165

However, this is not adressed in the worst case scenario nor considered in this impact statement as evidenced by the statement:

> The number of supersonic flight sorties to be flown in the proposed flight airspace does not include 419 TFW sorties... (page 18)

Thus, the DEIS fails to consider the adding of additional flights from the 419 TFW to those of the 388 TFW in the proposal.

2.1.5 Locations of Proposed Training:

> As might be expected, once the HAMOTS Upgrading System (HUS) tracking equipment is installed...the HUS Arena will generally be the area of first choice for scheduling air-to-air sorties. (page 18)

158 168

As pointed out earlier, it is inappropriate to tie the proposal adoressed by this DEIS with another proposal that is not yet implemented.

2.2 Alternatives to the Proposed Action: Unless it can be shown that a critical need exists for additional training space, the state would favor the alternative listed under 2.2.1 No Action. (page 19) This option limits local supersonic F-16 training to existing supersonic space in the southern portion

4 4

of the Utah Test and Training Range. If, however, is can be shown that a critical need exists for additional training space, we would favor option 2.2.2, i.e., other areas for supersonic flight training (page 20).

Under 2.2.2.1, Supersonic Flight Areas Selection Criteria, you have listed:

> (1) As an optimum the area should be located within 100 nautical miles...of Hill AFB to minimize the time/fuel required to transit to and from the area.
>
> ...
>
> This 100 nautical mile criteria is applied to the F-16 training area alternative analysis since greater distances would preclude a sufficient amount of time devoted to actual supersonic flight air combat training in each sortie. A significant reduction of training time in this manner would severely impair the unit capability of meeting mission requirements. (page 20)

4

In an earlier portion of the DEIS, discussion included the need to adequately meet combat simulation requirements. For this reason, since the Gandy Extension Range is outside this 100 NM radius, areas within the UTTR and within the 100 NM radius should be given more serious consideration. 4

Other considerations among the listed criteria are:

> (3) The area should be very sparsely populated so that the fewest number of people are affected by the noise impact resulting from supersonic flight training. (page 20)

The DEIS should consider the possibility of future growth in this area as well as the impacts upon the residents already living within the proposed airspace.

> ...[The] Gandy Range Extension...is located outside the optimum 100 nautical mile range. However, it is close enough that this was determined to be an acceptable trade-off when compared to the considerations presented by other alternatives. (page 21)

2.2.2.2.1 Lucin Military Operations Areas (West and North of R-6404): "This area fits the 100 nautical mile criteria better than the Gandy Range but is less acceptable according to the other selection criteria." (page 21) The Lucin MOAs are rejected as viable alternatives in the DEIS for the following reasons:

> Certain land areas beneath this MOA have already proven to be very sensitive to the noise created by existing low level aircraft activity. ...there have been noise complaints...[there] has even been alleged damage to chicken ranching...[in addition,] pilots stationed at the Hill generally feel the topography of this area does not lend itself to air combat maneuvers as well as does Gandy." (page 22)

We agree that sensitivity to noise due to low level aircraft is a problem. In fact at recent hearings in Ibapah, Utah and Ely, Nevada, this was a common complaint. If this is a problem to those living under the Lucin Military Operated Areas then we expect it is also a valid concern for those living in or otherwise utilizing the space under the proposed Gandy Extension. As noted earlier in the state's comments, the additional noise impact due to additional aircraft that would be using the proposed airspace is a significant concern not addressed in the DEIS. 4 4

> "In addition, none of this airspace can make use of the elaborate tracking equipment which will make up the HUS Arena described in 1.1.2." Because "...a good portion of the Gandy Range..." is within the HUS Arena, it "can be used to its fullest capability. (page 22)

Again, the location of the HUS Arena is merely "proposed" at this time.

2.2.2.2.2 Restricted Airspace R-6404:

This restricted airspace meets all the selection criteria except size. Commercial airways border the north and the south sides of this airspace

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> and air-to-ground training ties to the DoD property below further restricting the airspace that might be used. This airspace is small to begin with; when the size is further reduced by conditional restraints it becomes unacceptable. (page 22)

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The DEIS stated that usually only the northern portion of the Gandy Space would be utilized. Except for when the R-6404 airspace is being used for air-to-ground maneuvers its size is similar to the northern portion of the Gandy Extension Range. Although sometimes inconvenient, some sharing of airspace to facilitate both types of required training (i.e., air-to-air and air-to-ground) should be considered when the trade off is conducting intense military exercises over non-DoD owned land.

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2.2.2.2.3 Restricted Airspaces R-6402 and R-6405:

> Together these airspaces meet the selection criteria; separately they become prohibitively small. However, constraints in these areas do reduce them to an unacceptable size. The western edge of R-6402 is part of the UTTR already approved for supersonic activity and would provide no additional carrying capacity. (page 22)

Not withstanding the quoted language, only a tiny portion of R-6402 is already designated for supersonic flight. Therefore most of 6402 is available as additional supersonic carrying capacity (see figure 2).

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> Also Fish Springs National Wildlife Refuge is located below the border of R-6402 and R-6405 as well as a historical Pony Express and Stage Route which leads to Calleo and which has several historical sites. Although no damage would be expected, these areas would be subjected to sonic booms under this alternative. In addition, none of this airspace can make use of the elaborate tracking equipment which make up the HUS Arena depicted in Figure 3.0. If the area of Dugway and Michaels were avoided, this alternative would appear to impact less residents...(page 22)

Again, the HUS Arena is not yet in place. THe DEIS assumes that it is

significant to protect the Wildlife Refuge and the historical sites from being "subject to sonic booms under this alternative". The State of Utah believes that it is equally significant to protect wildlife, the Deep Creek Wilderness Study Area and the Goshute Indian Reservation that would be impacted by sonic booms if the proposed airspace is approved. In addition both these areas are within the "optimum 100 NM radius". Therefore, the State finds no compelling reason why these areas are not considered more seriously for redesignation as supersonic airspace. It appears, in particular, that R-6405 would be less objectionable than the proposed Gandy Extension, as it has the advantage of being within the 100 NM radius. In addition, there are no competing air-to-ground combat maneuvers in this area.

4 4

V. ENVIRONMENTAL CONSEQUENCES:

4.0 General:

The environmental consequences addressed in this section are found to be generally acceptable for residential living, and the specific training sites identified later within the proposed airspace will generally avoid areas of known population. (page 35)

The fact that the Air Force finds an impact "acceptable" is not an appropriate description of the consequences of the proposed action. The DEIS should objectively describe the impacts rather than impose subjective judgements on the reader. In addition, the assurance "generally avoid" is not specific. If the Air Force intends to avoid certain areas, this should be specifically included in the proposed action.

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4.1.2 Noise Impacts:

4.1.2.1 General:

> Noise in the area will result from two sources: the aircraft itself, and from the phenomenon produced when an aircraft exceeds the speed of sound and causes a sonic boom. (page 37)

Noise will also result from additional subsonic activity in this area due to a more intense use of the airspace as has already been discussed. However, the report states that: 169

> When the aircraft is at subsonic speeds...the noise levels will be insignificant. ...The Public Affairs Office at Hill AFB logs and minitors all noise complaints that are received because of Air Force operations in the vicinity. They are unaware of any history of noise complaints coming from the land areas beneath the airspace under consideration. (page 37)

This is inconsistent with testimony at the recent hearings in Ibapah, Utah and Ely, Nevada, where several residents complained of the existing noise due to subsonic flight activity and expressed concern over additional activity in the area. 169

> If approved for supersonic flight, aircraft involved in air-to-air training in the airspace will be at subsonic speeds during most of their flight, but will accelerate flight when conducting basic fighter maneuvers. (page 37)

Since the number of flights will admittedly be more, and the subsonic floor is 100 feet AGL, the additional impacts from many more subsonic flights need to be fully addressed. 170 170

4.1.2.2 Supersonic Noise (Sonic Booms):

> A focus boom occurs when shock waves from an aircraft in supersonic flight converge on the same point in space at the same time ... Estimates of the

intensified overpressures occuring as a result of focusing range from two to five times the peak nominal overpressure. (page 39)

...

171 The Air Force, along with other DoD services, is involved in efforts to model the situation to determine where and in what situations focus booms will be generated. More information on these efforts and their findings should be available for inclusion in the final version of this document. (page 39) 171

The additional information referenced should be in the final EIS.

4.1.2.2.1 Sonic Boom Effects on People: The impacts discussed in section 4.1.2.2.1 are based upon studies conducted in 1968. We do not consider test results from 1968 to be current and thus not a reliable for inclusion in this report. (page 39-40)

Although some adaptation may be expected with repeat sonic booms, startle is a primitive response and whenever an adequate startle stimulus occurs, a startle response ordinarily follows. (page 40)

172 Where is the basis for this conclusion? Is it merely the opinion of the authors? 172

Because of the geographical conditions beneath the Gandy airspace and because of the location of the existing supersonic airspace, the Gandy airspace is capable of facilitating three training areas, each with its own ellipse where supersonic activity will take place. (page 41)

173 This observation tends to confirm the States' concern that alternative areas discounted due to insufficient size were in fact large enough to allow supersonic flight training. 173

Some experiments have shown a tendancy for sonic boom exposure to degrade

> the performance of certain visual, steering and tracking tasks, while others have shown no effect on performance. ...[these have] also been reported to interrupt work, rest, recreation, school and other day-to-day activities. The actual acoustic masking effect of the boom is negligible because its duration is only a fraction of a second. However, the actual interruption will often last longer than the boom whether or not startle occurs;...thought processes may be interrupted without immediate recovery, and group activities may require a short time to resume their previous business. It may take several minutes before the interrupted activity is fully resumed and order is restored in the case of groups of individuals. (page 45)

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If these results are to be expected, as the report states, the State views these impacts as unacceptable intrusions into the classroom environment. This intrusion also adversely affects the quality of life in the community as a whole, as well as adversely affecting the wilderness user's experience. Additional research concerning the impact of sonic booms on the citizens of the State and their educational, working and recreational experience is necessary before any assessment of impacts can be meaningful.

4.1.2.2.2 Sonic Boom Effects on Animals:

> Although domestic livestock have been observed during exposure to sonic booms, their reactions have not been conclusive and in most cases, indicated only recognition of a sound stimulus. ...Generally, though, the magnitude of animal responses to sonic boom overpressure normally experienced has been slight. (page 46)

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Additional work is also necessary to determine the actual effects of sonic boom activity on animals. The relationship is not clearly known. For example, the DEIS quotes Cottereau of the National Veterinary School Of Lyon, Lyon, France as saying;

> Chronic direct effects on wild animals have not been investigated, but no significant effects of this kind are presently foreseen. (1978) (page 47)

This confirms the state's position that all effects of the proposed activity have not been studied. The statement that no significant effects are foreseen is an opinion and as such not evidence favoring this conclusion. Our position is further grounded in the following statements from the DEIS:

> An FAA study completed in 1973...states that "Knowledge concerning the effects of sonic booms on wildlife is limited, but it appears that sonic booms do not pose a significant threat." (page 48) (emphasis added)

In addition the DEIS points out;

> While available data indicates wildlife and animals demonstrate limited response and no nestling death or eyrie abandonment, questions on long term protracted exposure and sublevel responses remain to be studied. (page 48)

A study from 1970 is quoted in the DEIS as stating that it was:

> ...[n]oted that the reactions by animals were more pronounced to low flying subsonic aircraft that to booms. (page 46)

It follows then that the impacts of additional subsonic activity on animals needs to be addressed. This, however, is indicative of a greater failing of the DEIS. It almost totally fails to address the environmental impacts of subsonic activity.

> ...[t]he supersonic flight ellipses in Figure 8.0 do not extend into the Deep Creek Mountains. Therefore, normal supersonic operations should have no impact on this habitat. (page 53)

If the ellipses of predicted acitivity do not extend over this Wilderness Study Area, then why request its inclusion in the proposal? As earlier noted in our comments, if this area and others the Air Force purportedly intends to "avoid" during supersonic flight activity are not included, then the rejected alternatives would be of similar size to the Gandy Extension Range.

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4.1.5 Impact on Air Traffic: The DEIS states that there is:

> ...[c]omplete radar coverage down to 15,000 feet AGL from the 299th Communications Squadron's radar antenna located on a 9,300 foot mountain south of Ogden. (page 11)

However,

> There is a proposed radar modernization project that will locate a 'gap filler' radar site at Tippett, Nevada, which will complete the airspace's radar coverage between 5,000 and 15,000 feet AGL and lower. Funds have not yet been approved for this project, so it is not known when it will be constructed. (page 13)

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Since anticipated flight coverage is to be more intense, this could pose an additional safety problem to non-military aircraft. The following statements, however, illustrate that the Air Force has failed to recognize that additional military aircraft pose an additional hazard.

> As compared to current subsonic flight operations, supersonic flight training will not result in special procedures or operating limitations being placed on private aircraft. (Page 53)

> A majority of the general aviation traffic in this area can be expected to operate below 10,000 feet AGL and most supersonic training can be expected to take place above this elevation. (page 54)

> Based on this analysis, the proposed action should have minimal effect beyond current levels on general aviation in the area. (page 54)

However, the "analysis" is merely an unsupported conclusion that does not address all of the impacts associated with additional military traffic.

> ...resident fear and anxiety toward aircraft accidents may result from or be intensified by sonic boom activity. (page 54)

The DEIS should also note that resident fear or anxiety may result from

increased flight activity.

4.3 Relationship of Proposed Action to Land Use Plans, Policies and Controls:

Prior to the notice of intent, additional scoping was accomplished as the local level. (page 56)

176 When and where were these meetings held? The residents at the recent public hearings in Ibapah, Utah and Ely, Nevada remarked that they had not been given adequate notice of this action and the State is not aware of such activites. 176

4.3.1.2 Access to Non-Military Aircraft:

177 The Utah Division of Wildlife Resources has indicated that they frequently have encountered difficulties accessing that area in order to conduct wildlife surveys. The timing of these surveys is often important to the accuracy of the results. However, if the joint usage policy will prevent regular and predictable access to the area by DNR, that impact on DNR operations should be evaluated. (page 56-57) 177

4.3.2 Recreation Plans:

4.3.2.1 Wilderness Areas:

The Wilderness Act of 1964 (PL 88-577) established a National Wilderness Preservation System consisting of wilderness areas to be designated on federal lands. Wilderness as described in the Act, "...has outstanding opportunities for solitude...there should be...no use of motor vehicles, motorized equipment...within any such area." (page 57)

...[e]arly in 1980 BLM identified a portion of the original Deep Creek Mountain inventory unit as a Wilderness Study Area... (page 57)

It is not anticipated that the proposed supersonic activity would involve any irreversible damage to the unique qualitites of the Deep Creek Mountains. (page 57)

178 It is inconceivable that the solitude experienced by users of the Deep Creek Mountains will not be adversely impacted. The DEIS should openly acknowledge the inconsistency between sonic booms and a wilderness experience. 178

> ...[t]he elliptical training areas where sonic booms are expected to be generated are not located over the Deep Creek Mountains WSA. The altitude of these mountians make the airspace above unattractive for air combat maneuver training. (page 57)

Again, as earlier mentioned, if this area is not anticipated to be used then why include it in the proposal at all?

4.6.2 Minimum Weekend/Holiday Area Flying:

> Use of the area for weekend/holiday supersonic flight training will be minimized. (page 61)

179 Again, what kind of assurances will be provided? Will this be an offical policy? For this position to be used as a mitigation measure it must be included as part of the proposed action. 179

VII.. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT:

4 We believe that this list is out of date. For example, Dr. Jim Bunger is no longer the Utah State Science Advisor. He left this post approximately two years ago. We suggest that this list be updated so that copies of the DEIS and the EIS are sent to the correct people and offices. 4

APPENDIX B
SONIC BOOM CHARACTERISTICS

The discussion which follows will summarize the background and the latest available information for sonic booms. (page B-2)

HUMAN RESPONSE:

Of the many field studies conducted to better understand community response to sonic booms, the three most extensive were conducted over St Louis, Oklahoma City, and Edwards Air Force Base. (page B-8)

180 However, the studies utilized by the Air Force were conducted in 1965 and 1967. These are outated and do not belong in this report. 180

Finally the DEIS cites "The Sonic Boom Literature Survey" from 1973. The document claims it is comprised of 92 investigations. When were these

181 undertaken? What type of studies were they? To the extent that these studies are used for a basis for conclusions in the DEIS, they should be specifically indentified. 181

STRUCTURAL RESPONSE:

The largest percentage of sonic boom damage claims has been for glass damage. Plaster damage is second. ...Sonic booms with over-pressure pf 3 psf tp 5 psf can cause minor damage to plaster on wood lath, old gypsum board and bathroom tile, new stucco, and suspended ceilings already damaged. (page B-12)

182 The discussion following this introduction again cites the 1965 study from Oklahoma City, Oklahoma and the 1967 study from Edwards AFB, California. Also, a test conducted in 1965 at White Sands, New Mexico is included. The State feels that these tests are out of date and therefore not appropriate material to base a decision regarding the proposal for additional supersonic 182

space.

The authors feel that:

> One additional investigation is worthy of mention. In 1977 an adobe house in southern Arizona was instrumented and evaluated while supersonic training was taking place overhead. The conclusion of the evaluation was that the adobe strucuture reacted similar[ly] to a conventional style structure. Based on this analysis, there should be no difference in the probability of damage to an adobe structure or a conventional structure. (page B-15)

183 189

This hardly constitutes a random selection necessary for a complete evaluation nor sufficient time upon which to draw conclusions related to the integrety of an adobe structure when subjected to supersonic training.

Bighorn Sheep: The document contains five observations from 1978 and 1979 which are inconclusive.

The Utah Air Travel Commission

December 15, 1983

Environmental Planning
HQ AFLC/DEPV
Wright Patterson AFB, Ohio 45433

Re: Draft Environmental Impact Statement, Establishment of the Gandy Range Extension and Adjacent Airspace as an Area for Supersonic Flight Training

Gentlemen:

The Utah Air Travel Commission would like to go on record as not opposing the creation of the Supersonic Training Range within the Gandy MOA. The range, as proposed, should have minimal immediate effect on commercial or general aviation utilizing that airspace. We do, however, wish to voice two concerns, both of which are safety related:

207 1. It appears there will be a large mix of aircraft operating within the Gandy MOA, some of which will fly at speeds less than 100 nautical miles per hour while others will operate at supersonic speeds. This definitely increases the risk of a mid-air collision with closure rates too rapid for see-and-avoid tactics. As military training activities intensify, it may become impossible for scheduled commercial flights to operate safely in the MOA airspace, requiring them to fly around MOAs as well as restricted ranges, except when air traffic control can verify no military activity. 207

208 2. In the draft environmental impact statement, it is stated that the creation of the supersonic training area will increase the number of military training flights. Presently there are several established airways used by commercial airlines which cross the western Utah deserts. As the number of military flights increase, there will be additional congestion around these airways, particularly in the joint civilian/military use MOAs, which in turn will increase the potential for accidents. Airline routing planners will surely take this into consideration and may impose restrictions on their equipment operating into or out of Salt Lake International Airport. This could have a negative impact on the economic potential and development of the Salt Lake City hub. 208

UDOT/DPS BUILDING - 4501 SOUTH 2700 WEST - SALT LAKE CITY, UTAH 84119 - PHONE (801) 965-4155

THE OFFICIAL ORGANIZATION RESPONSIBLE FOR IMPROVING UTAH'S AIR SERVICE
UTAH DEPARTMENT OF TRANSPORTATION

While both of these concerns are important, we feel the necessity of training a strong national defense outweighs the potential negative safety considerations imposed by the supersonic range. We do recommend, however, that the Department of Defense provide assurances that there will be cross utilization of the ranges set aside for the various branches of the military and that a long range master plan for future land and airspace acquisition be provided to both state and local planning authorities for their review and concurrance. 39

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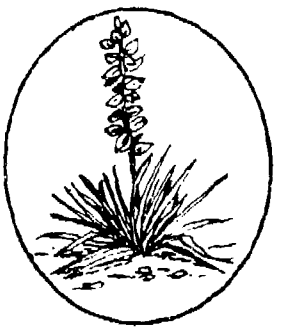
Respectfully yours.

Jess Agraz
Chairman

cc: Govenor Scott M. Matheson
Judith Hinchman, Office of Planning and Budget
Lt. Colonel Joseph Winsett, HAFB



Utah Wilderness Association

325 JUDGE BUILDING · SALT LAKE CITY, UTAH 84111 · (801) 359-1337

10 October 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sirs:

5 We are formally requesting an extension of time for public comment on the EIS (draft) for the Gandy Range, Hill Air Force Base, Utah. We learned of the EIS on 4 October and received the EIS on the fifth of October. The comment period terminates on the 14th of October. This is less than 10 days for analysis and comment. 5

Clearly this is violation of the NEPA public involvement regulations promulgated as a result of NEPA. Therefore we would like, at minimum, a 60 day comment period extension and public hearings and meetings to adequately discuss and inform the public on what is a very controversial proposal.

We do expect to hear from you soon. Thanks very much.

Cordially,

Dick Carter

Dick Carter
Coordinator

rcvd 13 Dec

Utah Wilderness Association

325 JUDGE BUILDING · SALT LAKE CITY, UTAH 84111 · (801) 359-1337

December 9, 1983

Environmental Planning
HQAFLC/DEPV
Wright-Patterson AFB, OH 45433

Dear Sir:

A disturbing sense of deja vu pervades the proposal to increase supersonic flight zone into the Gandy region. We have several serious concerns and questions about the preferred alternative. We do not support the expansion and feel there are better alternatives including using the existing supersonic space in the Wendover Bombing and Gunnery Range, Hill Airforce Bombing and Gunnery Range, and the Dugway Proving Grounds or using existing supersonic air space in Nevada.

185 The EIS presents five alternatives to the proposed action. On page iv of the EIS, they are summarily categorized as being impractical. This entirely biases any analysis rendering the EIS a subjective document. The adequacy of the EIS is suspect. An objective analysis is essential to determine not only the impacts of the various alternatives but to help in determing the best alternative. 185

160 We question the need for expansion of supersonic airspace. The EIS notes on page 3 that a previous EIS, done for the F-16 flight placement at Hill AFB, indicated no new supersonic airspace would be needed. Now the Air Force tells us that new supersonic airspace is required. This type of contractictory information is disturbing and negatively impacts the creditibility of the Air Force's EIS, public involvement and planning processes. 160

186 The EIS raises some readily apparent contradictory statements and conclusions. We are told that the new supersonic airspace is required for proper training of the pilots. However, map 2.0 shows that the Optimum Training Range for F-16 fighters is 100 nautical miles. This radius is well short of the proposed Gandy extension. The EIS also notes that aerial refueling to use the southern Nevada supersonic area would be too expensive. Doesn't aerial refueling simulate actual combat situations or are we to assume the F-16 fighters will only be able to defend a 100 mile radius? If the Air Force is so concerned about simulating real combat situations, why isn't aerial refueling considered as part of the necessary training? 186

187 The EIS accurately indicates potential impacts to the residents of Dugway (page 22 and 23). It also details the hardships families of Hill AFB personel may face (pg. 24). However, the EIS is callous in its analysis of the residents of the area to be impacted. It is questionable if only 350 people live in the region. Nevertheless, even if "only 350" people live in the area, they are still individuals every bit as important as military personel and their families. It is hard to imagine that only 12% of these people would be annoyed. Knowing many of the residents of Snake and 187

Deep Creek Valleys and having worked with them, I find it hard to believe that all of them wouldn't be annoyed by the supersonic overflights. In fact, present military flights in the area disturb people.

131 The impacts to the local economy are not adequately addressed in the EIS. Much of the area is a prime backcountry recreational resource. This is particulary true of the Deep Creek mountains in Utah and the Goshute Mountains in Nevada (note: the EIS also fails to note that this range is a Wilderness Study Area (WSA) within the proposed supersonic expansion area). Any potential for increased recreation could be squelched by expanding the supersonic flight area. 131

188 What are the long term effects of sonic booms on individuals? The EIS does not present detailed research that takes into account long-term effects. Won't the lifestyle of the residents and the enjoyment of visitors be adversely impacted by the overflights and sonic booms? 188

189 The impacts to wildlife could be great. Bighorn sheep are being reintroduced into the Deep Creek Mountains. They are a wilderness dependent species, intolerant of disturbances. Again, there are no long-term studies mentioned in the EIS on the effects of supersonic flights on wildlife. Also, there are no studies that relate to sensitive species such as bighorn in the EIS. Are there any studies specific to bighorn sheep of which the Air Force is aware? 189

In conclusion, the draft EIS raises many questions and concerns. There are too many unknowns. These unanswered points lead one to believe the EIS is inadequate. Again, we must reiterate our opposition to the proposal and feel there are better alternatives available. Thanks for the opportunity to comment.

Cordially,

Gary Macfarlane

Gary Macfarlane
Natural Resource Specialist

cc:

Governor Scott Matheson
Senator Jake Garn
Senator Orrin Hatch
Congressman Dan Marriott
Congressman James Hansen
Congressman Howard Nielson
Commanding Officer, Hill Air Force Base

rcvd 13 Dec

December 5, 1983

Dear, Sirs

As the Student Council of the West Desert School, we wish to express our concern about the proposed use of this area for testing and training the F-16. As representatives of the student body we are directly concerned about the effect this proposal would have on our interests as a school.

Our school, West Desert High and Elementary, is located in Partoun, Utah. Student body members consist of students from Trout Creek, Partoun, Uvada, Gandy, and Henry's Creek. All in the proposed testing area. In all, we have fifty (50) students, Nineteen (19) high school and thirty-one (31) elementary. We have an average of one teacher per 17 students. We have a strong academic program, a single "A" basketball team, an excellent music program, and a growing computer science program. We have a new school building with a library, gym, and lunchroom. We want to make you aware that we are here and we love our school.

We appeal to you to use your influence to try and stop these proposed plans which we, as a student body, strongly oppose. We like it here and wish to stay, here in the peace and quiet we have grown to love.

Sincerely,

The West Desert School
Student Body

President: Ernest Bates

Vice-President/Representative for Elementary: Kimberly Allen

Secretary/Treasurer: Randy Bates

Historian: Katherine Lewis

Representatives for grades 7-12:
Toni Rowlance "9th" Robert Montague (12)
Corey Bates (8th)
Delicia Henrrod (10th) Rory Bates (7th)

D-262

White Pine

Chamber of Commerce

Phone: (702) 289-8877

Box 239
Ely, Nevada
89301

October 25, 1983

Headquarters
U.S. Air Force
The Pentagon
Washington, D.C. 20000

Gentlemen:

206

During the September meeting of the Board of Directors of the White Pine Chamber of Commerce, much concern was voiced regarding Air Force Proposals to extend its supersonic flight testing area in the Gandy Range MOA across the border west into Nevada from Utah.

Our Board is opposed to any further extension of military air space in Nevada. We feel restricted air space is already placing too many expensive limitations on private and commercial aircraft needing access to communities in the state. An estimated 35,000 persons use our county air strip annually. Many flights are having to detour around certain areas, causing more expense and extended flight times. In the case of the air ambulance flying from Ely to Salt Lake City, already existing restricted air space is causing delays for flights when every minute counts. Area ranchers are very concerned about being unable to fly to and from their property without "advance requests" being approved, and with the added annoyance of more daily sonic booms.

206

We hope you will reconsider further restricting the air space in the State of Nevada.

Sincerely,

Thomas Lyle Taylor
President

cc: Public Relations, Hill Air Force Base, Utah
Nevada U.S. Senators Laxalt and Hecht
Representatives Vucanovich & Reid
Governor Richard H. Bryan
Nevada State Senator Rick Blakemore
Nevada State Assemblyman Virgil [illegible]co

rcvd. 16 Dec 83

The Wildlife Society

Nevada Chapter

December 10, 1983

James F. Boatright
Environmental Planning
HQ AFSC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Mr. Boatright:

The Nevada Chapter of the Wildlife Society is a non-profit organization comprised of professional wildlife biologists from state and federal governmental agencies and private interests. The Society is dedicated to the wise management and conservation of wildlife and the habitat upon which all wildlife rely for life. We feel that Air Force plans to establish the Gandy Range Extension and adjacent restricted airspace as an area for supersonic flight training could result in significant detrimental impacts to the local wildlife resource. After careful review of the Draft Environmental Impact Statement addressing this action we have the following concerns.

General Concerns

190 The need for expansion of available supersonic airspace arose from increases in military operations not anticipated in the 1977 Air Force EIS, "F-16 Beddown at Hill AFB, Utah". Although the USAF concluded that existing supersonic airspace would satisfy the requirements of the F-16 mission in 1977, it now admits airspace requirements were either underestimated or unaccounted for (Sec. 1.2.1, pg. 3). Indications from the Gandy Range Extension DEIS are that operations in the area will continue to grow. Specifically, conversion of the 419 TFW from F-105 aircraft to F-16 aircraft will mean an increase of 24% in the number of supersonic flights out of Hill AFB (Sec. 2.1.4, pg. 16). Why are proposed and potential increases in military activity excluded from impact assessments in the DEIS? Are there any guarantees that future growth of military operations in the area will be restricted? 190

Research concerning sonic boom effects on wildlife clearly appears to be limited and inconclusive. While chronic,

direct effects on wild animals have not been investigated, and while sonic booms are markedly more disturbing to birds than to mammals (Cottereau 1978), the potential for impacts to wildlife in the area should not be discounted. Areas within the boundaries of the proposed supersonic airspace extension contain high densities of breeding, migrating, and wintering raptors, and include sites identified for possible reintroduction of bighorn sheep and peregrine falcons. Will introduced animals respond differently to disturbances than established resident populations? Will military operations in the area preclude state and federal wildlife agencies from working towards the establishment of once native species? Because research in the area of sonic boom impacts on wildlife is limited, the USAF must assume a "may affect" rather than "will not affect" attitude in the analysis of impacts.

191 191

192 Does the USAF intend to request formal Section 7 consultation with the U.S. Fish and Wildlife Service concerning potential impacts to bald eagles, peregrine falcons, and steptoe dace? 192

Possible wildlife conflicts not addressed in the DEIS include disturbance from sonic booms to kit fox and bighorn sheep in the Goshute Mountains should they be reintroduced there. The valley environment under the proposed and existing supersonic airspace provides habitat for the kit fox, a furbearer whose population trend and status is currently being monitored on public lands by the BLM. Additionally, the Goshutes have been identified by the Nevada Department of Wildlife as being one of 16 sites statewide that may be suitable for reintroduction of California or Rocky Mountain bighorn sheep (Golden and Tsukamoto 1980). How will increased sonic booms affect either of these species?

191 191

Impacts expected from the proposed level of supersonic flight activity are assessed in the DEIS as they would affect organisms residing at 5000'. Much of the key wildlife habitat included within the boundaries of the proposed airspace extension occurs at elevations well in excess of 5000'. What overpressures can wildlife residing at the higher elevations be expected to experience?

193 193

Two statements concerning peregrine falcons in the DEIS are erroneous and should be corrected. These include comments that there are no documented sightings of the peregrine falcon in the area of concern (Sec. 4. 1. 3, pg. 53) and that the historic eyrie near Wendover is located immediately north of the proposed airspace (Sec. 3. 1. 4. 2, pg. 33). A peregrine falcon was sighted in the Goshute Mountains in August, 1983 by U.S. Fish and Wildlife Service employee Steve Hoffman. Additionally, the location of the historic eyrie is within the boundaries of the proposed airspace.

194 19

Specific Concerns

The Goshute Mountain and Antelope Valley areas support some of the most important raptor habitat in the state of Nevada. Since these areas lie directly beneath the regions of sonic boom impact (Fig. 9.0, pg. 52), more considerations should be given to the possibility that raptors might be impacted and to the importance of these areas to raptors. Specific areas of concern in regards to raptors are addressed in the next paragraphs.

1. The Goshute Mountain area represents a major western inland migratory route for raptors. Studies conducted by the BLM and USFWS between 1979 and 1982 show that over 12,000 raptors migrating at a rate of 16 birds/hour have been observed in the Goshutes between August and October. In addition, there is evidence to suggest the Goshutes may also serve as a spring migration route as well. While migratory raptors include primarily sharp-shinned hawks, cooper's hawks, and goshawks, fair numbers of red-tailed hawks, kestrels, golden eagles, bald eagles, marsh hawks, and broad-winged hawks also utilize the area. Will high level sonic boom activity in the Goshute area influence raptor migration patterns? 195 195

2. The Antelope Valley area from T26N to T31N has been identified as key winter habitat for bald and golden eagles. Since 1977, these raptors have been observed wintering in the valley. Will frequent sonic booms disturb wintering eagles? 196 196

3. The Goshute Mountains provide important nesting habitat for golden eagles, prairie falcons, marsh hawks, and a variety of accipiters. How will the increased supersonic flight activity affect nesting raptors? 197 197

4. A bald eagle roost site in the Goshute Mountains has been observed to support eagles from January to March since 1981 (Pave and Miller 1981). Evidence suggests the roost site has been used by eagles for many years. While eagles are less tolerant of disturbance when roosting than when engaged in other activities such as feeding (Steenhof 1978), the elevation of the roost site may make eagles even more susceptible to sonic boom impacts. Since the roost site occurs at 9000' what overpressures can eagles at this elevation be expected to experience? Also, will frequent sonic booms cause roost abandonment and/or increase stress leading to increased mortality? 198 198

5. The historic peregrine falcon eyrie located south of Wendover represents one of only 3 to 4 sites identified statewide for possible peregrine falcon reintroduction. While the eyrie itself is located within the boundaries of the airspace

extension area, historic use areas are included in both existing and proposed supersonic airspace (Ballantyne and Jones 1981). Several techniques for reintroduction of peregrine falcons exist. How would increased sonic boom activity affect implementation of these methods? 199

6. Valleys south of the Goshute Mountains including Antelope Valley have been identified as areas supporting high densities of ferruginous hawks by the Nevada Department of Wildlife. Additionally, 90% of the 250 to 350 nesting pairs that occur in Nevada are located within a 150 mile radius of the proposed airspace extension boundaries. Ferruginous hawks are listed by the USFWS as Category 2 species, meaning they are being considered for classification as threatened or endangered due to habitat loss and disturbance by humans. Nesting ferruginous hawks are extremely susceptible to disturbance of any kind. If approached by vehicle or on foot by humans, this species will readily abandon its nest, particularly during the egg laying and incubation stages. Will the level of sonic boom activity proposed in the DEIS cause nest abondonment by ferruginous hawks? 200

The Nevada Chapter of The Wildlife Society is opposed to the establishment of the Gandy Range Extension and adjacent restricted airspace as an area for supersonic flight training. Rather, we support the use of Nellis AFB as an alternative. The increased fuel costs incurred by the USAF from using Nellis would be offset by the loss of one F-16 resulting from a raptor caused collision. 201

If the proposed action is approved, the USAF should adopt the following mitigating measures to minimize impacts to wildlife:

1. The USAF, in conjunction with state and federal wildlife agencies, should develop a monitoring program to evaluate impacts from sonic booms on wintering bald eagles, nesting ferruginous hawks, and reintroduced peregrines. Should conflicts become evident, the USAF should limit the number of supersonic flights allowed in key areas during critical periods such as nesting and wintering. 4

2. Guarantee should be included in the final EIS that increases in supersonic flight training and other types of military operations proposed for the supersonic airspace extension area will not exceed estimates described in the DEIS. 202

Thank you for the opportunity to review the draft document. We hope our comments will be considered in the development of the final Environmental Impact Statement.

Sincerely

William A. Molini

William A. Molini
President, Nevada Chapter

cc: Chapter Committee Members
Bob McQuivey, NDOW
Don King, USFWS
Andy Leitch, Nevada Wildlife Federation

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Mrs. William R. Wilson
P.O. Box 665
East Ely, Nevada 89315

Sirs, The Air Force plans to close the comment period on its DEIS covering a proposed new Supersonic operations area in Nevada-Utah October 14. We urge you to request that the period be extended 60 days so we may respond fully. Public hearings are in order, too. Thank you, Holly M. Wilson

6

10/14/1983

Enviromental Planning
HQ ALF/DEPV
Wright Patterson AFB, Ohio 45433

To all concerned:

I strongly appose the proposed increase in the range of supersonic flights over the Deep Creek Valley along the Utah Nevada Border for the following reasons:

203

1. The impact area includes the Deep Creek Mountains, currently under study as a wilderness area. The mountain range includes some of the most pristine, undeveloped and beautiful land in the United States. The supersonic flights would destroy the wilderness potential of the area and have a negative impact on the wildlife in the range.

203

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2. The quality of life for the people in the area would be destroyed. Fourteen sonic booms per day would be so distressing and damaging as to render the area uninhabital. Our farm house is in the flight path of the supersonic planes currently flying in the area. The sonic booms are frightening and have already broken several of our windows. We've suffered this damage even though supersonic flight is presently prohibited in the area!

3. The value of the farms and ranches in the area would be destroyed. It is an accepted fact of agricultural economics that earning a living on a farm is difficult. The value of these farm properties represents the only savings most of these people have. The proposed supersonic flights would reduce the value of the farms and ranches, and perhaps even render them unsaleable. We personally would suffer tremendous financial difficulties if this were to happen.

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4. Sonic booms are a health hazard. They shatter windows and flying glass and can be dangerous. The noise is damaging to the human ear. Sonic booms are also psychologically unnerving.

205

4

5. The Goshutes, the largest group of people in the area, will perhaps suffer the most from the flights. Having first been relegated to a remote reservation with little economic potential, they now face losing the peace and quiet of the area, which is the main redeeming value of the place.

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In addition, the proposal has been handled secretively. The first notice we had was an article in the Salt Lake Tribune on October 10, indicating the close of the comment period on October 14th. This hardly seems adequate for a proposal so devasting to the quality of life, economic value and wilderness potential of the area.

5

We intend to object strenously to our Senators regarding the proposed flights and the improper handling of public comment.

Yours truly,

Dorothy E. Wiskowski & Ronald H. Weber

Dorothy E. Wiskowski &
Ronald H. Weber

Ibapah, Utah &

1163 Garfield Ave.
Salt Lake City, Utah 84105

TRANSCRIPTS

OF

PUBLIC MEETINGS

HELD

29 November 1983
Ibapah, Utah

30 November 1983
Ely, Nevada

1 December 1983
Elko, Nevada

PUBLIC HEARING

re

DRAFT ENVIRONMENTAL IMPACT STATEMENT
ESTABLISHMENT OF THE GANDY RANGE EXTENSION
AND ADJACENT RESTRICTED AIRSPACE AS AN
AREA FOR SUPERSONIC FLIGHT TRAINING
at
HILL AFB, UTAH

IBAPAH, UTAH
29 NOVEMBER 1983

ELY, NEVADA
29 NOVEMBER 1983

ELKO, NEVADA
1 DECEMBER 1983

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REPORTER'S CERTIFICATE

I hereby certify that I, CHERRIL H. NELSON, was present at the public hearings at Ibapah, Utah and Ely, Nevada in the matter of the Supersonic Flight Training Proposal, and recorded the said proceedings.

That as such reporter, I transcribed from tapes the entire proceedings and testimony given, and that the following 151 pages constitute that record, and that the same is a full, true and correct record of the testimony taken and proceedings had at said times and places.

DATED at Hill Air Force Base, Utah this 13th day of January 1984.

Cherril H. Nelson

CHERRIL H. NELSON

The hearing at Ibapah, Utah commenced at 1505, 29 November 1983.

Colonel Casari: I am Colonel Guido Casari: I am a trial judge with the Air Force stationed at Travis Air Force Base, California. My role here is simply to conduct the hearing, maintain a fair and orderly procedure, and insure that the time limits are followed as closely as possible so that we may conclude as closely as possible to the termination period scheduled for this hearing at five o'clock.

I have not been involved in the development of the supersonic flight training proposal or the Draft Environmental Impact Statement on that proposal, and I will not be making any recommendation or any decision respecting the proposal.

Now, first on the agenda this afternoon is an explanation of the supersonic flight training proposal and the draft statement. Lieutenant Colonel Joseph Winsett, the briefing team chief, will introduce the briefing and the two other briefers, Mr Larry Davis and Mr Keith Davis. Following this presentation, there will be a short period of five to ten minutes to permit questions to be asked by you to clarify any point in the presentation. We will then have statements and comments from the public. The order of speakers will be elected officials first, if it is their desire to speak, followed by any official representative of state and local government agencies. Also on the agenda, tentatively scheduled for three-thirty p.m., weather permitting, is a sonic boom

demonstration. I am advised that an F-16 will fly at supersonic speeds to create a boom at some 15,000 feet above the ground.

We ask that speakers limit their comments and statements to five minutes so as to permit as many as possible of those who wish to speak to do so. Now I'm flexible on the times and if there is opportunity to permit people to speak longer, we will try to do that. To give the greatest opportunity for all those who wish to present comments to do so, we requested before the meeting that those wishing to speak fill out a card which was available at the back of the room and to bring it up to the front of the room, the table at the extreme right, so that we may call you appropriately. You may fill out a card now if you so choose and have not already done so. Speakers will be recognized from the floor only if time permits and after all those requesting and registering to speak through filling out a card, have had an opportunity to do so. If time does not permit one an opportunity to speak today, then one may certainly submit written comments or statements. This may be done by presenting such documents to me at the conclusion of the meeting or by sending them to the following address:

HQ AFLC/DEPV
Wright-Patterson AFB OH 45433

and if anyone needs that address, I'll be happy to provide it to them individually. You have until the 16th of December 1983 to get any written comments you may wish to submit in to us. That

date also marks the closing of public comment on the Draft Environmental Impact Statement.

We have a tape recording system in place and a verbatim transcript of the entire hearing will be made. To insure your comments are recorded, it is essential that you speak directly into the microphone which is provided at the center of the room in the front.

I wish to acknowledge the presence at this hearing of Mr Chester Steele, Chairman of the Tribal Council of the Confederated Tribes of Gosiute Indian Reservation and of Mr Charles Stromberg and Mr Reed Russell, Tooele - and I practiced a great deal to be able to pronounce that properly - Tooele County Commission. I am also advised that there is a representative of the governor - of the Office of the Governor of Utah present to observe. We welcome them and all of you to this hearing. Lieutenant Colonel Winsett.

Lieutenant Colonel Winsett: Thank you sir. Our presentation this afternoon is not intended to be brief. On the other hand, it will outline what the proposal is. After that proposal is provided to you, it will probably be about time for us to observe the sonic boom demonstration. We'll come back and be glad to take whatever time is necessary, as Colonel Casari said, to clarify anything that we may have said during the briefing. I'd like to introduce at this time, Mr Larry Davis, who is Chief of Tactical

Operations for the Utah Test and Training Range, and he ill brief you on the proposal for the supersonic flight trai ing area.

Larry Davis: Now before I get into my briefing, I would like to cover the legend on the map of what all the color coding means. First of all, to kind of orient you, we have Ogden located here; Salt Lake; Tooele; Delta, Utah; Ely, Nevada; Ibapah, where we are now; this is Wendover, Utah; Elko, Nevada right here. The area that you see marked in red going around the range (indicating on the map), this air space right here, the air space down through here and up around, that's what we call a military operating area. That means the military can operate in there in conjunction with general aviation. In other words, its a see and be seen environment. They operate under VFR conditions and anybody can go through here without having to ask permission. The area that you see marked in blue up on the north range (indicating) and down on the south range, this area here, this is a restricted area. What this means is no one can operate in there, either military or general aviation, unless prior permission is received from the 299th at Hill Air Force Base. And this is called Clover Control. The black cross-patched area, this is a supersonic air space that we now utilize. The area that you see marked in yellow is the area that we would like to redesignate as supersonic air space. Now, once again, this is a military operating area. We utilize this

air space every day on a day-to-day basis. The only thing we'd like to do is to be able to go faster in the air space that we already utilize.

Now the reason for this, back in 1978 when this was first proposed, we realized that we were going to be changing from the F-4 aircraft into the F-16. Now the F-4 aircraft could go supersonic but it took a lot of effort and a lot of gas.. We knew we were going to be getting the F-16. The F-16 is a much smaller aircraft, it has a larger engine; consequently, to be able to fly the aircraft in the manner it was designed to, we knew that we would be going supersonic more than we were back then with the F-4.

Another area that was driving this is, we were picking up an air combat instrumentation system to be located in this area. What this is, it's a system designed to teach young pilots how to fight air-to-air or dogfight better and it's an air combat maneuvering instrumentation system. It has sixteen different instrumented sites located in this area (indicating on the map) that can see everything that's going on in three-dimensional form. It sends this information back to Hill Air Force Base and someone sitting down in front of a video console can see what's going on in the range out here. Consequently, we can send the younger pilots out here to hone their skills in air combat maneuvering and the instructor pilots no longer need to go along. They can now go to another building up here on Hill, sit down in front of this video console.

and they can see what their students are doing out there, and they can see all the mistakes that are being made. All of this is also being tape recorded or video taped so that when the students land, or when they'd fly back to Hill, when they land, they can go over and get with their instructor, they can play the video tapes back, and the instructor can go over all the mistakes that were made. So it's a great training device out in this area.

Now, why do we need this area here? There were three factors that were driving that. First of all, we wanted to take advantage of the supersonic air space that we already had permission to fly into - which is located here (indicating on the map). That posed a problem in that when the students were out flying - or the young pilots - when they were flying to the east then they could fly the aircraft the way it was designed to fly and they could concentrate on their opponent. The minute they turned around and headed towards the west, now they had to worry about keeping the aircraft subsonic and, therefore, they couldn't concentrate on the flight, so they really weren't getting the training that they needed.

Another factor that was driving this in locating it here, we had looked at this area down here and we have Dugway Proving Grounds, and they've got a lot of sensitive equipment right down here and so that was another feature that made it desirable to

place it right here. We looked at putting it up in here. We have an air-to-ground scorable gunnery range called Eagle Range, located here and this area just wasn't large enough.

Another factor that was driving the decision to place it over here, is that we have certain air-to-ground targets located out on the range and we have to locate these targets on DOD-owned land. In other words, government-owned land, and we own the land up in here. So a lot of our air-to-ground targets that we utilize are located in this area.

Now we have two primary missions. We have what we call an air-to-ground mission and an air-to-air mission. The air-to-air mission is the one we were just talking about - the dogfighting which takes place in this area and the air-to-ground would occur along here. And what would happen is a pilot would take off from Hill, fly low level up to this area, down through the corridor, and then come in here. He would climb up and roll in on the target and then drop his bombs.

Having the MOA as supersonic air space here means that we could conduct simultaneous missions. In other words, we can be flying ground attack missions over in this area, we can simultaneously be flying air-to-air missions in this area. So that was another factor that was driving it.

There was a need to locate this very close to Hill Air Force Base and the reason for this, number one, is that the F-16

is very limited on fuel. In other words, it normally only carries about an hour twenty minutes worth of fuel and it takes ten minutes to get out to the range, ten minutes to get back, and so it - if it only has an hour - the pilot only has an hour in which he can train. The further away that you locate this, the more difficult it is for him to train.

Another factor that was driving this is that to be able to keep your skills up in air combat maneuvering, you have to do it on almost a daily basis. It isn't something that you can fly for two weeks and then skip for three or four months and then go back at it again. You've got to keep it up on a daily basis.

Now when the EIS - that's the Environmental Impact Statement - first came out,it talked about 30 to 38 booms reaching the ground out here during a given day. Now, I'd like to emphasize that that's on the worst case situation. In other words, when we put this out, we had to address the fact in here, what would be the worst case. And we do have exercises that are conducted out in this area periodically, several times a year, just for a short time, where we do invite aircraft from all over the United States into Hill Air Force Base. One of these exercises is called Red Flag, and there are times during the year that we would be flying enough out there to generate 30 to 38 booms, sonic booms, but on normal conditions, we would only expect about eight sonic booms to reach the ground on a given day. And once again, when I say a

sonic boom reaching the ground, it doesn't impact the whole area at the same time. In other words, a person up here may hear the boom, a person down here may not hear it, and so it all depends on the - on many factors - on altitude, humidity, temperature. When these booms - or sonic booms - occur, they normally occur at altitude and that's where the pilots start their engagements. They normally start their engagements between 20 and 30,000 feet and they start head on and that's the time when they'd like as much airspeed as possible. Once they pass each other and begin turning and twisting they go subsonic very quickly. So what I'm saying is that it's not like they're going to be driving out here supersonic as fast as they can go over the entire airspace. They only do it to start the engagement, it lasts for four or five seconds, and then that's it. They're all through with that portion of it, until they start their next engagement.

We have a 5,000 foot buffer area. In other words, there is no supersonic flying below 5,000 feet above the ground. And that's to dampen out the noise and that's also as a safety factor too.

Now at this time, I'd like to turn the remaining portion of the time over to Keith Davis and he'll be talking about the environmental impact of sonic booms in the area.

Mr Keith Davis: Very briefly, I just want to tell you what is talked about in the Environmental Impact Statement. As we mentioned, this area that Larry showed is already heavily used by the Air Force. The main impact that will be associated with this proposal is the generation of sonic booms - those shock waves that's created by the aircraft as it goes faster than the speed of sound. Those are the primary impacts.

In the Draft Environmental Impact Statement we address the impact on people. In all cases we feel that's livable. The Air Force references some ninety-two studies, that, in no case has there been personal injury. They are annoying but that is going to be the worst part of it, the annoyance.

Impact on animals - again, no specific studies have been shown where there has been injury to animals, or at least the Air Force is not aware of it. If you're aware of some studies that are different than that, that's the kind of comments we would definitely want to know about.

The impact on structures - there is going to be the small possibility under a situation like this that there could be damage to plaster and the windows. We feel that's a very small probability. Studies have shown that most structures, well constructed, would have no impact from booms as high as eleven pounds per square foot. That's a kind of a rating on the intensity of a boom. We're looking at probably booms of two and a half pounds to maybe a maximum of

five or six pounds per square foot. So we don't think we're in a critical range at all.

The impact on terrain - again, we don't think this will have any impact on mining or subsurface geology.

Impacts on area economics and land use - the Air Force has looked at four areas where there has been supersonic operations area over public lands and private lands, and the basic finding of their study was that there was no significant impact on the economics of the area.

Those are the major issues. Those are areas that we would definitely like comments on, disagreements, whatever and, again, if somebody hasn't had the opportunity to see the Environmental Impact Statement, we have some copies here. 16 December is the close of the comment period.

The history of this impact statement - I believe it was mentioned before - this proposal was first originated in 1978 within the Air Force. At that time, at Hill Air Force Base, we performed an environmental assessment. We sent it forward through channels to our higher headquarters. In February 1980, they decided that that environmental assessment, that's the EA, that format was not comprehensive enough to address the issue. They directed us to start a Draft Environmental Impact Statement process.

We first published a notice of intent to prepare a statement in August of 1980. That was published in the Federal Register

There was news releases from Hill Air Force Base, We also sent out notices to various county and state agencies. In August of 1983, the impact statement was finally released to the public. From 1980 to 1983 it was internal in Air Force channels. There was a couple of studies that the Air Force was trying to perform to get a better handle on how to address the impact, how to describe it. That's the main reason why it took that long to get to the public comment period.

Soon after it was released, we got a number of inquiries or comments, particularly from Nevada, that people did not have adequate time to refer to it. We then extended it now to the 16th of December, and we also scheduled public meetings for this week.

We will then get the comments and concerns from the public meetings, try to incorporate them into a final impact statement. We think that will be done - hopefully be completed during 1984. That will then go back to Air Force. If they determine they're going to make the decision on it, that will again be released to the public for comment period. And that's where we are now. We may not be looking till '85, '86 before the Air Force is actually ready to put that out and say they've made their decision or what they feel they would like to do. That's not hard and fast, but we just don't think it'll happen faster, in a quicker time frame than that. And that's all then.

Colonel Casari: Ladies and gentlemen, I would like to now extend you an opportunity to ask any clarifying questions you may have. You need not have filled out a card to ask a question and you may ask the question from your seat, but I would ask whoever is designated to answer the question, repeat the question into the microphone before giving the answer so that we may have it properly reported. Are there any questions?

Spectator: (Question was asked from the audience but she could not be heard.)

LtCol Winsett: Excuse me. Why don't you come on up here and everybody can hear your question and you can use this pointer and we'll all be better off for it probably. Thank you.

Spectator: I'm from Callao and I lived twelve years at the mill site. I think it's about right there (indicating on the map). Okay. Now the jets come over us all the time. One wrecked out there not very far from us, just about three or four years ago. Now, you guys are talking about having a sonic boom out here but you're talking 15,000 feet. I've never seen one 15,000 feet. When they come over me they're 25 and 30 feet and I've even had one have a sonic boom over me at 15 and 25 feet. So what point is this one that's coming out today to do 15,000 feet? That's my only question.

Colonel Casari: Ma'am, do you wish to state your name for the record? You don't have to if you don't want to.

Spectator: I'm Linda Tim.

Colonel Casari: Thank you.

LtCol Winsett: I am not going to say that you did not observe an F-16 at a very low altitude over your property and that as a result of that flight that you did hear a lot of noise. But I will go on record as saying that there is no supersonic flight permitted by F-16 aircraft operating out of Hill Air Force Base, or any other aircraft utilizing the Utah Test and Training Range, no supersonic flight is permitted outside of this hashed area (indicating on map).

Mrs Linda Tim: Okay, I showed you the wrong spot then. If this is Ibapah, we live on this side of the mountain from Ibapah and we're just nine miles north of Callao. So we are in that area. I'm sorry. I didn't know that was Wendover.

Colonel Casari: If I correctly understand, and I would like the record to reflect that the correction indicates, ma'am, that you do live within the area of permitted supersonic flight?

Mrs Linda Tim: What I was wondering about is, there is no -- (question was unintelligible).

LtCol Winsett: Yes ma'am. For the record, supersonic flight in this area is not permitted below 5,000 feet. Now I'm not denying that you may not have encountered a low-level flight of an F-16 or an F-4, or another aircraft that may be operating in the Utah Test and Training Range, I'm just saying that

supersonic flight is not permitted below 5,000 feet in this current designated supersonic training area. And I thank you for your comment. Are there any other clarifying questions before we really get into the public comment. And there's the sonic boom, or there's the aircraft. (Aircraft could be heard overhead.)

Colonel Casari: Colonel, do you wish to adjourn in order to permit people to observe, or do you wish --

LtCol Winsett: If you want to go outside, go ahead. As far as I can determine, they're just making passes overhead right now. The demonstration shouldn't be for another two minutes. So let's adjourn. If you want to go outside or stay in here, whatever.

Colonel Casari: We'll be in recess for two minutes.

(Meeting recessed at 1536 and readjourned at 1547.)

Colonel Casari: The meeting will come to order. I would note for the record that during the recess at 1536 by my watch. That is 3:36 p.m. a sonic boom occurred.

LtCol Winsett: Can you folks upstairs there where it's nice and warm hear us now any better than before? Yes? Who's saying no? You can't hear us? Okay. (Sound level was turned up.)

Colonel Casari: Are there any other questions? Yes sir.

Spectator: I think it should go on the record that for the assessment of this sonic boom, that the mach number and the

altitude and the winds and the temperature will be recorded so that there is some - you have some way to compare this with any kind of sonic boom and the fact that the plane was in level flight, etc., etc., and the fact that some glass fell out of the roof in this building when the plane came over.

Colonel Casari: We will insure that the data respecting the circumstances attending the sonic boom demonstration are placed in the record.

LtCol Winsett: I'm still here for clarifying anything pertaining to the proposal. Does anyone have any other questions concerning the proposal? Yes sir.

Spectator: My name is Jim Goode. I'm the refuge manager at Fish Springs National Wildlife Refuge and we're used to a lot of these flights. My question is - and if it's not pertaining, just take it off - with the proposed airspace, could you tell me, or if you can't do it, what some of the flight patterns will be and if they are going to change from what we now get?

Colonel Casari: Mr Larry Davis will respond.

Mr Larry Davis: Fish Springs, for those that aren't aware of where it's located, it's down in this area right here (indicating on the map), and we don't forsee where the types of flights would differ from what they're doing right now. In other words, it would pretty much be the same as to what you're experiencing.

Colonel Casari: I believe there is a question from a gentleman in the front row.

Spectator: I asked the hearing officer if we could raise questions during our statements. He indicated that he thought he would permit that, so I'm going to withhold any questions until my statement.

Colonel Casari: Very well. Yes sir.

Spectator: You know, the sonic booms that you just heard - like the small kids that we got here, their ears are more sensitive than us grownup people. They're the ones that going to suffer later on and we could go ahead and talk all we want, but you're still going to make the sonic boom happen no matter what we say, or what anybody does. They're still going to have it. Just 'cause he flew at 15,000 feet, the next one when you're not here is still going to come down a little lower. He's going to be flying just over the top of this building. Just 'cause they've got all this high-powered people here, he's flying up there just to make you guys happy.

Colonel Casari: Thank you sir. Do you wish to address any comment to that?

LtCol Winsett: No.

Colonel Casari: Are there any other questions? Yes sir. If you wish, state your name for the record.

Spectator: My name is Dan Nelson. I'd like to know - that overflight - what altitude he's flying at. That's my first question.

Lt Col Winsett: The altitude was at 15,000 feet above ground level; 20,000 feet above sea level.

Mr Dan Nelson: And could you tell me if he was at level flight?

LtCol Winsett: The aircraft was at level flight.

Mr Dan Nelson: And the other question that I had was in regard to the Red Flag training that you anticipate in this area. What duration or time period would you anticipate that you would have Red Flag activities in this area when you would have a more intense training period?

LtCol Winsett: The term "Red Flag" was really not appropriate. That is a common term that we use for a lot of aircraft operations that are involving exercises conducted by the Air Force. Primarily, those take place down at Nellis Air Force Base. We do, however, at Hill Air Force Base, conduct air operation exercises. Usually those are in the summer months when the weather is good. Aircraft from other bases from throughout the United States or even overseas, as far as that is concerned, can come in and use the facilities at Hill Air Force Base. We anticipate that those types of exercises will be probably one or two per year and usually in the summer months.

Mr Nelson: Colonel, how long do they go on?

LtCol Winsett: And they last for about a week.

Mr Nelson: Okay, thank you.

LtCol Winsett: Now, that was a general statement. Okay? I'm not saying that maybe we won't have three scheduled next year - maybe just one scheduled next year, but our pattern thus far have been about two air-to-air, air-to-ground exercises involving a lot of aircraft and a lot of sorties out on the range.

Colonel Casari: Yes sir.

Spectator: I'm Milton Hardman. You made a statement that they are supposed to stay 5,000 feet above the ground level. Does this include the mountains, the valleys, or just what type of terrain are they supposed to stay over the 5,000 feet? That's one question.

Mr Larry Davis: When we're talking about 5,000 feet, we're talking about 5,000 feet above the highest point of the land, and so if they're operating in the area where it's very flat up here, then this elevation would be around 4200 and that would be 5,000 feet above that. If they're operating down in the Deep Creek area then they should be 5,000 feet above the highest point of land down there and that runs up to around 10,000 feet.

Mr Hardman: Okay, a back up. I was in the military service in the Air Force National Guard. We were always instructed never to fly our airplane in dangerous situations. My pilot flew up the Grand Canyon in a C-119 where I could have reached out and

touched the walls. What I'm telling you is that once those pilots have left their trainers, such as ours, we didn't do what they told us to do. To back this up, my boy went to the National Guard out at Camp Williams this summer put on by the National Guard, living in Ibapah, some of them said, "Oh yes, we know about Ibapah. We have a heck of a good time confusing our instructors because what we do is, we go down below the radar, change our position, and rise up." I happen to be living in that very valley they do that in and I have watched them make those switches. What control - my question is, you've mentioned they are mandatory they can't go below this 5,000. My question is, what penalties are there if they do and what controls do you have to prevent that from happening?

LtCol Winsett: To clarify the 5,000 foot buffer zone again, supersonic flight is not permitted below 5,000 AGL. As far as the integrity and discipline involving our pilots are concerned, if they do violate their established rules of engagement, their operating procedures, and it's discovered that they did violate that, then there are disciplinary actions that are taken against that aircrew member. I would like to impart with you that our pilots today - I'm not saying that some don't deviate - I'm saying that most of them are very mature and very professional and realize the sophisticated weapon system that they're flying and the responsibility that they have for conducting a safe flight.

If we're finished with the clarifying questions concerning the proposal, at this time Colonel Casari, I'm going to turn it over for the public comment period.

Colonel Casari: Well, thank you. First I would like to call on Mr Chester Steele. Mr Steele.

Mr Chester Steele: My name is Chester Steele. I'm the Chairman for the Gosiute Tribe. I just have one announcement which one of the members here on the panel has probably announced already. There's a luncheon after this meeting.

Okay, for now I'd like to just briefly introduce the area of Gosiute Reservation. Okay, the introduction of the Gosiute Indian Reservation. The Reservation is comprised of 110,352 acres of which 71,554 acres are in Nevada and 38,793 acres are in Utah and lands are tribally owned. Each reservation family can be allotted an acreage on the reservation for their use. The population of the enrollment is 369. Income producing activities are limited on the reservation due to the extreme isolation factor hinders industrial development on the reservation. Indian people have little means of support except for which can be derived from farming, livestock raising and employment at the Gosiute Enterprises.

Only by abandoning their lands and leaving the reservation can be most obtained permanent work on the nature providing livable wages. On the reservation land lies between the elevation of 5,500 feet and 12,000 feet.Irrigable lands lie between elevations of 5,500 feet and 6,500. The general slope of irrigable lands are

from one to three percent. The rangeland is gradually rolling and undulating except for mountainous terrain on the south and east ends of the reservation.

The Gosiute Reservation has its wildlife resources. The existing wildlife resources are deer, woodchuck, ruffie grouse, sagehen, antelope, hungarian partridge, ring necked pheasant, quail, mallard duck, and the rainbow trout. Wild edible vegetation, just to name a few, are chokecherry, elderberry, wild onions, pine nuts, and wild potatoes.

The native language is spoken and it is limited. Although the majority of the Indian population speak the English language, the Ibapah community has public school. Student enrollment is sixty-two and sixteen Indian students. Grade school students are transported by bus from 7:00 a.m. to 4:00 p.m., five days a week, twenty-five miles one way and fifty miles total. There are about nine Indian students currently attending Wendover High School. Students are transported by bus, five days a week, 7:30 a.m. to 3:30 p.m. The distance is about 65 miles one way; total of 130 miles round trip, and also we have about 17 other students currently enrolled in various states and vocational trade schools and colleges and university throughout Utah and Nevada, California.

I'm just going to have to jump around here. Okay. On October 5th, 1983, the Daily Times ran a series for the United States Air Force regarding sonic boom and proposing to extend sonic

flight testing area westward for Utah. It is evident that the US Government has proposed in restricted areas for military purposes. Such proposals and restrictions are areas the Salt Flats west of the Great Salt Lake and southward from Dugway Proving Grounds, acreage and mileage involved are unknown and possibly unidentified. To some unknown reason perhaps the Air Force representatives here today should explain and clarify the matters on the acreage I have mentioned do not apply to this area but there are those people in the surrounding area own livestock and to those livestock owners it should be clarified and areas - of areas that are being restricted. 142 142

Existing supersonic flight space area is located southwest of the Salt Flats beginning only a few miles south of Wendover and some few miles west of Knolls Station or auto wrecking and southward about 40 miles and east of Goat Hill and only a few miles north of Callao, all in Tooele County, and now the US Government and the United States Air Force is proposing to extend supersonic testing area westward to the northeastern Nevada to Elko County and White Pine Counties. The total counties involved are Elko, White Pine, Juab, Tooele, and Millard.

Let's see, I'll just read the last part here of my presentation. There has been studies made by the various agencies such as physicians, attorneys, commissioners, senators of both states, Nevada and Utah. The utmost very unheard of rule individuals

located in isolated and remote areas, from civilization, so to speak. Civilization consists of large cities, towns where heavily populated people are near interstate routes, railroads, even air terminals and main supermarket chains. The people of such isolated and remote areas are constantly degraded and are no value of cities and governments of the United States. So, therefore, such isolated remote areas are identified and proposed to be the supersonic and possibly nuclear waste dumps of the United States of America.

When I was in a grade school, our teacher used to have us as a group or a class, to sing each day. And one of the songs that was - that brought back memories because of all of this pollution and testings - was the song, it's called "America the Beautiful." And the song has some interesting verses about - America was once a - once upon a time a free country - America was once upon a time had purple mountains and blue spacious skies. America was, at one time, a beautiful country which no longer exists. America had purple mountains and blue skies which no longer exist. Such qualities of once upon a time America is now becoming the supersonic test areas and waste dumps of nuclear. And I'd just like to say the species that would be affected from the supersonic testings would be the human egg, the unborn child within the mother's womb, is affected by sonic boom which would be - children in schools relating to their educational studies are affected by supersonic booms. As you heard, the one that was being released earlier and people of races and all colors within the valley are affected by

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sonic boom. Not only people but natural resources as well, should be livestock, wild game, crops, wild vegetation, all are victims of sound waves or better known as the sonic boom. So as the Chairman of the Gosiute Tribe 1, in the form of a resolution, which I did not prepare yet, but we are still working on it and along with our comments, we will probably be presenting that to you people. So thank you.

Colonel Casari: Thank you, Mr Steele. I now call upon Mr J. Kennedy. I believe the middle initial is "P" but I may have that wrong. I understand that Mr Kennedy is the Tribal Council attorney for the Gosiute Tribe, or Confederated Tribes.

Mr John Paul Kennedy: Thank you much Colonel. My name is John Paul Kennedy. I'm Tribal Attorney for the Gosiute Tribe. I practice in Salt Lake City with the firm of Boyd and Kennedy and Romney. I've represented the tribe, our firm has, for over 30 years and I personally have done work for the tribe for the last dozen years. I've come to this valley many times during that period of time and I'm pleased that the tribe has asked us to be here today. I'm with Paul Ashton, who is another lawyer in our firm, and he will speak briefly when I'm through.

We want to thank the Air Force for assisting in arranging this hearing here today so that you people could come and participate. We've been grateful to them for their willingness to accommodate the interests of the people as far as holding this hearing is

concerned. I wish there were other good things that I could say at this time, but I think that's the end of the good things. I have a number of comments to make and questions to raise.

First of all, the Tribal Council has indicated to us that they are opposed to the proposed - they are opposed to the proposal that has been presented. I believe the chairman has given a few of the reasons why they are concerned about it and why they are opposed to it. In making a rough count, I see approximately seventy residents of the valley that are here today. I'd like to know if any of you that are residents of the valley here today are in favor of it. Would you raise your hand. I think the record should show that there is no hand raised.

Colonel Casari: That is correct.

Mr Kennedy: Are any of the residents of the valley here today opposed to this proposal? Would you raise your hand? I think the record should show that a significant number of hands were raised. I can't count them but my guess would be in the neighborhood of thirty or thirty-five.

Colonel Casari: That seems accurate.

Mr Kennedy: Are there any residents of the valley here today who have no opinion on the issue at this time? Would you raise your hands? I think the record should show that there are no hands raised.

Colonel Casari: That is also correct.

Mr Kennedy: Now, in the time that I've come to this valley, I've remarked to myself and to others on many occasions how beautiful this place is, not only because of the visual impact but also because of the peaceful nature of this area. It's one of the few places that I've been in the United States where you have a truly peaceful, quiet environment. One which is very, very unusual. Now that sonic boom that you heard earlier was flown at level flight at 15,000 feet above ground level. They can come down within the tolerances of their permitted range another 10,000 feet. As most of you know, the impact of sound varies inversely with the square of the distance, which means the closer it's to you the louder it gets and it's not just a little louder, but it goes up by the square of that difference. In other words, a significant difference. We asked the Air Force to fly at 5,000 above ground level today and they would not do it. Now you can ask yourself I guess why they would not do it.

The Indian people who live here and whom we represent have been in this area for generations and generations. Many of the non-Indian people have also been here for many, many generations. The people that are here have made sacrifices to be here. Certainly the non-Indians have sacrificed greatly in building their ranches, their farms, their homes, establishing their mines and their other workings here in this area. It has taken a lot to do that. The Indians have sacrificed a lot too. As many of you know,

the Gosiute people, which includes part of the Shoshones, extended at one time from far into Nevada all the way over to Tooele. That land was taken from the Indians, as the courts have held, back in the late 1800s. They have sacrificed a great deal in having that land taken from them. The government arranged to have this reservation set up for the Gosiutes back in the 1914 timeframe. As Chester indicated, the reservation that remains is about 110 or 120,000 acres. That's to be compared with many, many thousand square miles that they originally had. That land is gone and they've been left with a much smaller area. The tribe is very proud of their area. They're proud of the beauty of the area. They're proud of the people. They're proud of their relations with many of the non-Indians here. They're proud of what they've been able to accomplish in terms of building an industry here, small as it may be, but one which has been successful in contrast to many other tribal enterprises across the country. They're proud of their future. They're proud of their youth and they're proud of the opportunities that lie ahead of them. A question that I would like to have the Air Force answer is, "What is in it for the Gosiutes to allow this to happen here in this area? What's in it for the non-Indians?" As far as I can tell there's nothing in it, except some vague notion of expanding our capability as a nation to train our people. Granted, that may be true but that doesn't explain why it's going to be put here as opposed to someplace else.

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The Gosiute Tribe does not consent, does not consent, to allowing its airspace to be used for this purpose. We believe that the consent of the Gosiute Tribe is essential before that airspace can be so used. The Gosiute Indian Tribe is a sovereign, independent entity. To my knowledge, there has been no statute, no taking of their space, their airspace. While much of their ground has been taken and they've been compensated for that, there has been no compensation paid to the Gosiute Tribe for the taking of airspace and they do not consent to allow it to be so used. And I think the record needs to have that very clearly stated.

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There were a number of points made during the presentation that indicate to me that there are many alternatives that have not been adequately considered. For example, there was a discussion briefly of the air combat system that has been set up in the area designated by the crosshatch. We would like to know why that area - why that system was set up in that area if the area was not suitable for the training purposes. Why wasn't the system set up, for example, in the area to the north of Wendover? Another point that was made was that they felt that the range needed to be close to Hill. I would also suggest that the area north of Wendover is much closer to Hill than we are here. The money that would be saved in fuel by using a northern - a more northerly situated area, would more than compensate the Air Force for building an entirely new air combat system, if costs were a factor. Can you imagine what it

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would be like here having a sonic boom approximately every twelve minutes, assuming they even stayed at 15,000 feet like we were told that they were flying at today. In the time that has taken place since that first sonic boom occurred, we'd have probably two or three more that would have occurred. Can you imagine your children in school trying to concentrate during that kind of situation? That's what they're up against. I wonder if the Air Force has considered that and I wonder if they have plotted the location of schools in the area north of Wendover and whether they recognize that there is a school here at Ibapah. 273

I would like to know whether the Air Force will guarantee that there will be no restriction of this airspace. You indicated that this was a military operational area. At this time, in a military operational area there is not automatic restriction. In other words, general aviation can use that same area. If it becomes a supersonic range, as they propose, will they guarantee that the area will remain unrestricted? 242

The implication made by one of the Davis' concerning the impact of the Environmental Impact Statement was that this kind of sonic boom does not affect people. Well then, why are they making such a point of the fact that there are few people living in this area and why don't they hold their sonic booms over Salt Lake City, for example. It seems to me that Tooele County is becoming the low point of the state. We're going to get the tailings out here from Salt Lake County, now we're going to get

the sonic booms from Weber County. Again, what is the advantage to you people here of those moves? Why don't they have them in the other area if they don't have any adverse impact.

Colonel Casari: Mr Kennedy, may I ask you to sum up please?

Mr Kennedy: Yeah. I have a number of points. I'm representing over 300 people here, Colonel, and if each one took five minutes it would take quite a while. I'm trying to go through it as quickly as possible.

Colonel Casari: I understand. I'm only trying to insure that all those who have signed up to speak have an opportunity. Thank you.

Mr Kennedy: Thank you. We also were advised in the Environmental Impact Statement that the area shown in the cross-hatch is over used. That they're using it for cruise missile tests and other things. Were those original tests planned as a part of those - of that space when it was designated as supersonic and if so, will the same thing happen here over this area? Why don't they move the things that are now taking place in the cross-hatch to some other place and let them do their military air-to-air exercises in that area. 214

I'd like to know whether, when you say that no supersonic flight is permitted under 5,000 AGL, whether that means that no 215

supersonic flight occurs under 5,000 feet AGL. I'd like to know how many deviations from the general rule have occurred over, say the last five-year period, and what has been done with the Air Force officers that have been involved in those deviations. 215 215 Cont.

Also in the Environmental Impact Statement it was noted that there were few complaints from the people in this area. On behalf of the Indian people, I'd like to have the Air Force know that we only have one telephone here and the one telephone that's here is frequently not working, so it's very difficult for the Indian people, and I assume also for the non-Indian people, to voice their complaints. Similarly, many of the older Indian people who are frequently looked upon as the spokesmen for the tribe, are not fluent in English and are not particularly fluent in ability to write English and, consequently, it is not surprising to me to know, or to hear, that you haven't received many complaints from them. That doesn't mean that they don't have any and I've heard many myself from them. 216 216

Mr Ashton of our office will now take a couple of minutes of my time, if he could. Thank you Colonel.

Colonel Casari: Thank you very much Mr Kennedy. Mr Ashton?

Mr Paul Ashton: My name is Paul Ashton. I'm associated with Mr Kennedy. I have a few questions here just in running

through the EIS. In the Environmental Impact Statement, they say that military aircraft,primarily F-16 aircraft will be used in the area. What other types of aircraft will be using it? My understanding is different types of aircraft have different impacts, can have much greater impacts. I assume this is being written down so we can get some type of response. 44 44

I notice that the EIS didn't take into consideration the members of the tribe that happen to live off-site, off the reservation, but feel that this is their home. Also, do we have a schedule of when the 419 Tactical Fighter Wing will be converting to F-16s and what effect that will have. A lot of these things have been covered. 217 217 218 218

I notice in the Environmental Impact Statement, you used the F-15 for many of the tests. In the appendages of the EIS, I notice there is some differences in those two craft and why haven't they been addressed? 44,45 44, 45

Another thing I would like to point out that concerned me especially, was the fact that in constantly talking about the noise levels that will be experienced, you talk about day-night average spread over 24 hours, and then you make much of the fact that the Department of Housing and Urban Development says that's okay. And yet, my understanding is the flights will be mainly limited to an eight-hour period; therefore, the noise levels will be much greater and the Environmental Protection Agency, which I would think is more efficient than HUD, looks at 55 decibals day-night as the safer level. Also, one thing that I would like to get clarification is the phenomenon called the "focus boom." What we experienced 219 219

today was - I don't know what the exact jargon is - but I believe it's more of a carpet boom. Focus boom, in my understanding, is where two waves hit each other, they are magnified two to five times; much like when you drop two pebbles in a lake and the waves intersect. I don't believe the exercises here will be involving just single jets and will that not enhance the possibility and probability of focus booms? 47

Also, I think it should have been noted in the initial presentation that, under the Air Force's own examination, that when an F-16 is flying at 5,000 above ground level at Mach 1.3, the sea-weighted decibels - over 24 hours again - this is not cramped into the eight-hour period where the reality is - will highly annoy over 35 percent of the people. Now, I wasn't highly annoyed with that sound I heard. Like I heard one person say, it sounds just like a shotgun. Nonetheless, your own studies say 35 percent of the people will be highly annoyed, what does highly annoyed mean? 220

And finally, on page 45 of the Environmental Impact Statement, you note that some experiments have shown a tendency for sonic boom exposure to degrade the performance of certain visual, steering, and tracking task, and yet you did not go on and state what results were shown. It seems we've only seen the positive tests here, the slight impact, and I think there is some real concern with health and safety. Thank you. 221

Colonel Casari: Thank you Mr Ashton. I would remind everyone that we do have a number of cards to get through and I ask you to please confine your comments to five minutes. I will begin to interrupt and advise you. I don't want to cut you off, I know there's a lot to say, but it's important that everyone have an opportunity to speak. Mr Cecil Garland of Callao.

Mr Cecil Garland: I wish to thank very much the Air Force for holding this meeting. I guess if I would have asked a question. I live in an adobe house that was built in about 1903. Already from the low-level flights and from the sonic booms that we receive, I question how long my house will stand. It has some great value to me over and beyond the cost of just replacing it. It's my understanding from talking to the people who lived in the Callao area for a long time, that Samuel Clements spent the night there and Barney Oldfield spent the night there, so not only when my house is shaken down, as I presume that it's going to be before too long, I will want to be reimbursed for the value of the home but for its personal, historical value to me. 222 222

Perhaps the question is, then, is not so much as this particular one incident, but is the Great Basin of Utah and Nevada to finally be recognized and admitted to by the military that we are to be a military reservation and that every scheme that is dreamed up or hereby conceived of, is placed upon the Great Basin of Utah and Nevada simply because we are a sparsely populated area. The history of the treatment of the military,

I'm sorry to say, is not good. Beginning after World War II, we began to get the radiation fall out above ground over the Great Basin, and I am convinced that there are people dying in this area because of the concentration of radiation. Sheep died in Skull Valley next to ours from poison gas, we're convinced, and the military has never admitted that. And then the Air Force come up with MX and it was only because of the enormous concern of the people of this part of the United States, the love of their vast valley, and the quietness of the valley, where we choose, not out of desperation, but out of choice to live here, that we rose up and opposed it and ultimately had it stopped. And now, we are asked to endure over and above the low-level flights, which I am convinced oftentimes, uses our vehicles, our homes, and our schools, as targets, whether by accident or design, I'm absolutely convinced of it. And the first time that I was driving along on the desert road and a jet airplane come over me somewhere between two and five hundred feet, probably more closely to two, I went into a shock, an accelerated heartbeat of fright, of fear, of myself and my child laying in the seat beside me. I'm settin' on a tractor and this comes over me, I'm sure that for an instant I lose control. I am that frightened. I know no one else who feels any different and it's the same whether you witnessed that low-level flight and it occurs time and time again and it comes at unexpected and it never lessens.

Now we are the recipients of this because we live in a sparsely populated area. James Madison - President James Madison wrote extensively about the will of the majority imposing its will upon the minority and one of the early corrections to the Constitution - amendments to the Constitution - was upon that very subject.

Now if this value that is presumed to be occurring from this was truly a value, then why don't we put it over Salt Lake City or Washington DC? Obviously, because they wouldn't tolerate it. Yet the stress to the individual is no greater over Salt Lake City to an individual than it is to an individual, a Native American, or to myself who chooses to farm or ranch. Our personal liberty of living without the fear of being simply shocked, having our houses rattled, having our livestock stressed, is a fear, is a freedom that I believe that we should be afforded. So, at this point in time, I think that we have to determine, whether by accident or designs the military chooses to simply make us a military reservation. If that is the case, then I object! I would like to state that it's my opinion that we exist here, not at the liberty or at the whims of the Air Force or any other part of the military, but that they operate here because we tolerate them to do so because that we recognize that we need, in this mad world of today, some form of defense.

There are different kinds of invasions. Assuming from some preposterous point of view that the Russians invaded us, they wouldn't stop long on the west desert. They'd get on down to

K-Mart and McDonald's. That's what they're more interested in. But the perpetual and endless invasion of the Air Force is, nonetheless, an invasion, and I simply wish to object.

Colonel Casari: Thank you very much, Mr Garland. Mr Ron Weber of Ibapah.

Mr Ron Weber: I think all the chinking's falling out of my house too. I never really thought about what the reason might be but maybe that's it.

I have a farm about ten miles south of here. If we all looked a little bored when the sonic boom occurred, it's because, I guess, to me, it was really kid stuff compared to what we're really used to hearing out here. (Applause) We've heard a lot better. Five minutes isn't much time to speak in defense of what's really important to you, and I might have a little more than five minutes worth of stuff here, and I guess I'll try to talk real fast because I want to get most of it in.

I'm going to have to read it because I'm not too good at speaking extemporaneously. I brought my wife along for that. No offense intended. She's really good. You know these valleys and the high desert country of the Great Basin are wondrous and spell-binding. Must have been in a place such as this that the phrase, on a clear day you can see forever or the silence is deafening, had their origins.

Well folks, if the Air Force has its way, things are going to change quite a bit around here. There won't be the silence that will be deafening. It will be good old heart-thumping sonic booms. The sound of freedom, as the military so affectionately refers to the phenomenon. It is interesting to note that they don't want this sound of freedom to occur over Hill Air Force Base. The sound of freedom will occur at the rate of approximately 100 to 125 sonic booms per day. And you may not be able to see forever as these aircraft belch 900 tons of pollutants into the atmosphere each year in this area. The Air Force tells us that it will only hurt a little bit. That there are no known adverse physiological effects on people of these overpressures. We must be mindful that today a significant number of southern Utahns are hurting more than a little bit, they being the innocent downwind victims of the 1940s atomic testing in Nevada, from which there were, at the time, no known adversephysiological effects, or at least admittedly unknown- or known.

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Unremittingly thorough, the Air Force also informs us that these sonic booms won't bother the reindeer or Sooty Tern. I'm happy to hear that but I'm mostly concerned with people. It bothers me. A sonic boom is roughly equivalent to the explosion, without warning, of a stick of dynamite in your backyard. Such a noise produces a startled effect which you can never get used to. The body is immediately flooded with adrenalin and other potent

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chemicals to give it energy and endurance for the emergency, and a sonic boom is an emergency. If you're on a horse and there's a sonic boom, it's an emergency or if you're operating a piece of power equipment, it may be an emergency. It might be good for the laundry business.

Continued over a long period, exhaustion of the powers of stress resistance follows. The body then loses control and these chemicals - hormones - proceed to overstimulate and attack vital organs. Blood pressure stays high and heart rhythm changes. Peptic ulcers, hypertensive kidney disease, tooth decay, arthritis, lowered resistance to other diseases, and premature aging are some of the consequences that eventually may follow. But then as they say, it will only hurt a little bit. 32 32

Of course sonic booms, as an unremitting diet, are harmful to your health. Forget about the Sooty Tern and reindeer. Even without a classical, closed solution, mathematical proof that this is so, common sense leads us to this conclusion. We can project from our own, not too meager, experience in this area. That noise will drive us all batty. That's why the Air Force doesn't want sonic booms over Hill Air Force Base. They don't want to be batty; they want us to be batty. Why us? Because we're small in numbers; 350 people they say, and because they think we're backward and dumb. I quote from page 63 of the DEIS, Draft Environmental Impact Statement, under the title, Details of Unresolved Issues, "because of the area's rural population and remoteness, area residents are

accustomed to a lifestyle free from encroachment of modern civilization." Have you ever felt so deprived? Well, they're going to fix that. They're going to bring you modern civilization in the form of that sound of freedom lullaby, BOOM! These lullabys may not put you to sleep but they will give you the power of levitation. You rise about two feet off the ground for a few seconds every time you hear one.

33 If this supersonic area - operating area - goes through it will be detrimental to your health and your pocketbook. Your land will depreciate in value because no one with all his marbles intact would live here and no one with all his marbles would want to buy in. The value of your land is intrinsically related to the lifestyle and peace and quiet that goes along with this area. 33

Most of you probably aren't out here for the money and most people don't buy farms and ranches for the privilege of experiencing the startled effect of sonic booms. You can get that same experience a lot cheaper by just sticking your finger in a light globe socket a few times a day.

This proposal is an act of aggression against our physical, mental, and financial well-being. The Air Force seems to forget that we're all supposed to be on the same side. Unless you misinterpret where I stand, let me mention that I believe in a strong defense. I always vote for the party that gives the military more money. I'm a super patriot and I've served in the military. One of my friends equates my political leaning as being just slightly

to the right of Genghis Khan. I just happen to believe that what the Air Force is proposing here, and the Navy in Nevada, is wrong. I believe this proposal infringes upon my basic constitutional rights to life, liberty, and the pursuit of happiness, and my right to own property. And this under the guise of protecting my liberty. If the military really needs to render this good valley unhabitable because of an incessant and abusive startling effect of sonic booms, let them exercise the government's right of condemnation and justly compensate us for the physical, mental, and financial losses which will surely incur. We're so vulnerable because we're so few in number and they're so strong. They have legions of experts and lawyers, which we pay for too out of our tax money. And yet, this Draft Environmental Impact Statement may offer a glimmer of hope. These legions of experts and lawyers, after years of work and who knows how much of your tax money, have proposed a very flawed document. I believe many of the arguments are specious, if not spurious, in nature. And by that I mean, some facts are said to indicate one thing when they may as well indicate another.

Colonel Casari: Mr Weber, may I ask you to sum up please?

Mr Weber: All right, I shall do that. The Air Force has other options. They're not just - they're just not the most convenient ones. For example, it's a mere 320-mile flight to use another area that's already designated an SOA and unpopulated.

They also have SOA areas over Dugway. They would have to coordinate their air-to-air sorties with air-to-ground sorties. They also mention that it would be bad for the morale of personnel if they had to be transported to other areas for this kind of training. Well, I submit that we have morales too, even as unaware of modern civilization that they deem us to be. I feel like the man in the bathtub in an apparent disarray, everything upturned, dogs and cats all over the place, and he says, above the surface I may appear calm but underneath I'm paddling like hell.

We all live our lives a little bit in quiet desperation and I prefer quiet desperation to noisy desperation.

Summary, one paragraph. If you want high blood pressure, hearing loss, arithmic heartbeat, peptic ulcers, arthritis, premature aging, and a nervous tic to boot, then do nothing. If you don't want these things, make some noise. Write to your congressman, each of them, Garn, Hatch, Marriott, Hansen, tell them thanks for the attention and ask them that you really don't think this joke is in quite the best tone, and ask if they just can't make this bad joke go away. Thank you.

Colonel Casari: Thank you Mr Weber. Mr Bateman - Mr Kyle Bateman.

Mr Kyle Bateman: I'm Kyle Bateman. I live here in the valley. I'm a rancher and I drive the school bus here in the valley, and as I was driving down the road, I was late because I

had to take the kids home and we did hear that sonic boom coming down the highway, about 40 miles an hour in our truck, after I'd taken the kids, and I would just like to assure that Hill Air Force Base that that is nothing like we have already experienced. That - I don't even know if some of the parents are aware of this but - and I can't give you the date, but you have a record of it because partial retribution was made to a ranch for damages that were suffered, and so you, I'm sure keep a record of that. I can't tell you the exact date. We might have it but I don't have it with me today. But there was a -- I experienced a sonic boom in our yard and it's really like having someone drop dynamite. I've never had somebody drop dynamite to the side of me, but - well, like I would imagine it would be - and my dad had been in the service and he - it shocked him. It kind of put you in kind of a shock. But that day it blew out windows, it knocked a wall away and some of the wall fell down from the foundation. The wall fell away. I got pictures of it. We did put in claims and that's the reason I know that they have a record of it because we did put in claims and they did make partial retribution for that.

That same day now - I can't tell you whether school was in session or not because I can't remember. But we did go over to the school. It was after class time so I can't remember. I'd have to look it up to know the exact date. Had that plane been coming from the opposite direction, all those great big - and I believe

they are four by four windows - would have fallen upon the kids. Now, I'm saying, had they been in class. I don't know whether they were in class. I can't do that because I don't have the exact date, I couldn't look it back and backdate it. Also, that day, plaster was cracked from between the bricks. It fell out on the floor. It was right there as plain as day. You could see it. There's cracks in the schoolhouse walls. The teacher - I tried to get the teacher to make a complaint. We got the papers and surrounding neighbors to make complaints and as far as I know we were the only ones that sent in. I even sketched windows for some of my neighbors. And it isn't that they aren't concerned. They are concerned but they do feel that it doesn't do any good. That's the comment I got from most of them. Well, why do it. They just keep on doing it. And I didn't know that we were set - it had been already a corridor because we've been experiencing this for quite awhile.

Also, as I drive the school bus down, and I expect that - I would imagine - I would estimate that plane was maybe three to five hundred feet above us in our yard. And also, I think another very dangerous thing - and I stand to be corrected - since 1979 is there 36 that have crashed? 224 274

Colonel Casari: If you're addressing that to me sir, I cannot answer it. I don't know the answer.

Mr Bateman: I believe my uncle checked that out and it was 35 and he added one because of the one that happened the other day.

Hey, four years. That isn't very much. If one of them lands in my yard down there and it's going to wreck our homes, our ranch, our corrals, and everything. And we aren't stretching that. We aren't - because these things do happen.

I was just talking to a neighbor before coming up here and this summer, hauling hay, it wasn't that the sonic booms were so annoying, he had to quit hauling hay. He was trying to pack it in tight enough to make it stand and so that the weather would be decent. And they kept buzzing him until they annoyed him that he had to quit hauling his hay that day. And he is here so -- and that was just this summer. There is 22 children in the school down here and I think that they deserve just as much respect and the safety that the ones in town deserve. And then there is also a bus that runs to Wendover. I have also been buzzed while driving my bus up here on the reservation - between the reservation and down here - with a busload of kids, and it true. For a moment, you do lose control. I hope not very long because I'm responsible for those 20 lives on the bus, that ride my bus. And so I don't appreciate that.

Colonel Casari: Mr Bateman, may I ask you to sum up please?

Mr Bateman: Yes I will. I'm going to read this part. The Draft Environmental Impact Statement states, "The proposed expansion area is sparsely settled with only about 350 people

living there." The fact is that over 200 of these people live in the Deep Creek Valley which is a fact that the DLIS fails to recognize which we feel is very significant. Also, there is a schoolhouse in the valley attended by the children. We feel that this fact alone should force reconsideration of the proposal. The high density of the aircraft that will be operating over this concentration of people poses a very significant safety problem. Fighter aircraft do crash, and like I said, I believe that was 36 since 1979. It is inconceivable how the Air Force can ignore this fact and continue with their present plan which will expose the people and school children in the valley to this unacceptable hazard. Another point, that should be considered is the statement in the DEIS that only 12 percent of the people, and I believe that I looked that up just before coming here, and it says 12 percent of the people living in the area would be highly annoyed by the sonic booms. And I believe this is an error. This is completely in error and unrealistic. In fact, this number should be nearly 100 percent. Our family has conducted an informal survey and has determined that all of the people were strongly against the proposal and very concerned with the low-flying aircraft and sonic booms.

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According to published maps, the Dietrich Valley is not included in the current areas, yet the Air Force has been using this airspace for subsonic and supersonic flights for a number of

years in violation of current rules and regulations. As a result, we, and other people living in the valley, are very familiar with the impact of training flights and sonic booms. The predicted 38 sonic booms per day, or five per hour, is totally unacceptable. The ones now being experienced are causing enough problems for school children, people and livestock.

Subsonic flights at low altitude are a common occurrence. The actions of fighter pilots seem to indicate they are using ranch houses, ranch buildings, people, and livestock for practice strafing runs. Experiences of members of the Parish families can attest to this fact. Objections to these flights have been made to Hill Air Force Base but no action has been taken. It would appear that the Air Force has little respect for established boundaries and little concern for the inhabitants of the Deep Creek Valley. From past experiences, we believe it is quite evident that if this valley is included in the proposed training area, the impact on the valley would be devastating. Property damage has also been experienced in the valley and it is certain that if the plan is approved, much more can be expected. Our family has made a claim for property damages which has been paid, in part. No one, and I repeat no one can deny that property values will be significantly reduced if the Air Force plan is approved. Sale of ranch land and grazing land will be very difficult, if not impossible, unless the asking price is substantially reduced. Why should the land owners

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in the valley be so penalized? What, if any, recourse do they have?

The statement in the DEIS, there would be no adverse effects on humans and no significant problems for domestic or wild animals, is incorrect. And I say, do we have to be the guinea pigs to prove that maybe in twenty years, yeah, it does affect humans. I don't think that we should be jeopardized. 228 228

One only needs to observe the reaction of grazing cattle as to low-flying aircraft and to sonic booms to know how wrong this is. Just ask any rancher or his family when they're subjected to the conditions of the training flights. It should also be noted in the Deep Creek Mountains are being considered for a wilderness area.

And this is in conclusion. It is quite evident that to include the Deep Creek Valley, the Deep Creek Mountains, and the Nevada hills to the west in this proposed training area and in the south, is wrong, as it would be very detrimental to the ranchers, their families, the Indians, the reservation, livestock, wildlife, and the wilderness study area of the Deep Creek Mountains. In the face of the facts previously stated, it is very hard to understand how the Air Force can continue to seriously consider including Deep Creek Valley and adjoining lands in the restricted area for high density fighter aircraft training. We therefore request that the Air Force review their plan for the restricted training area, withdraw their request for the proposed training area, and exercise one of their stated options for more suitable area. And I thank you for this time.

Colonel Casari: Thank you Mr Bateman. Ladies and gentlemen, unless there is strong objection, I'm going to propose a five-minute recess so that you may get up and move around and restore your circulation. We're in recess for five minutes.

Hearing recessed at 1640 and reconvened at 1645.

Colonel Casari: Ladies and gentlemen, in order to facilitate the matter, and I've shown that I've been flexible in trying to permit you to say what you wish to say. What I'm going to do is give you warning at three minutes which will permit you to begin your summary and perhaps we can conclude at a reasonable hour. Mrs Phyllis Bateman.

Mrs Phyllis Bateman: I've written my comments in the name of Rae and Phyllis Bateman, Kyle and Ranae Bateman of the Parish Ranch. But this is for all the people in this area cause I love them all and we're all very closely associated.

We, the above named ranch owners and Ibapah residents of long standing, want it known we strongly and absolutely oppose the Air Force Proposal to increase restricted airspace along the Utah/Nevada border for supersonic flights and training space for F-16 fighter planes of the 388th Tactical Fighter Wing of Hill Air Force Base and other supersonic jets.

The airspace being sought for expansion of supersonic flights and air-to-air combat training overlies western portions

of Tooele, Juab, and Millard counties in Utah and eastern portions of Elko and White Pine counties in Nevada. This completely takes in the Ibapah ranching district, its grazing properties, the Gosiute Indian Reservation, and the proposed Deep Creek Mountain Wilderness Area. Our ranches and our other properties in Ibapah Valley are included in the proposed restricted area, along with twenty-five neighboring ranches, and at least twenty additional homes. Within the boundaries of Ibapah, we have 200 people living in close proximity and a total of 350 people living within the proposed area. The Draft Environmental Impact Statement fails to recognize that the people of Ibapah live in a closely populated area, not sparsely settled as stated. We need to be recognized and taken into consideration on this proposal as we are the ones who will be adversely affected. The safety and welfare of the people of Ibapah have been of little concern to the military. We are law abiding citizens of these, our United States, and we demand consideration. The Air Force has little respect for established boundaries and little concern for Ibapah residents.

Low-flying jets are hazardous and sonic booms do destroy. Low-flying jets mean when you can hear the metal clang above the jets roar, see the flash of identification numbers beneath the plane, see the treetops above the low-flying jet, hear the loud roar above you as you drive your automobile down the road, and you automatically duck or sometimes run out of the road, practically fall off your tractor or horse as they fly directly above

you - or fly just over you - over the brink of a hill, etc. The fighter pilots seem to use our ranch houses and buildings of valley residents themselves, and our livestock, for experimental runs, realistic gunnery practice and supersonic attacks. Instead of being shell shocked, we will be jet shocked from intensified jet action.

Colonel Casari: Two minutes.

Mrs Bateman: The noise, as well as the concussion of the supersonic booms will annoy area people about 100 percent, rather than the statement of the DEIS that only 12 percent of the people living in the area would be highly annoyed. All the Ibapah residents are strongly against this proposal as we have already experienced damaging and explosive sonic booms and frightening roars of unexpected low-flying jets. In the hands of youthful pilots, these jets are an instrument of scare and frightening tactics for the purpose of amusement in their behalf because of our startled reactions. With the intensifying of training flights and the predicted 1,050 monthly sonic booms from F-16 fighter wartime tactics, we will be blasted out of existence. If noise from low-flying jets and sonic booms are not detrimental, why do babies cringe and cling to their mothers at the sound of a jet? Why do unborn babies quiver and jump within the mother at jet approach? Why do people jump and watch in angered anticipation as they watch for the jet's return or for the second jet? Why do grazing cattle

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stampede to the closest fence at the noise of a sonic boom? Human beings and animals alike become unnerved and can no longer function properly because of the loud booming concussion of an expected sonic boom or the roar of the low-flying jet.

No, we can never adjust to the noise of the sonic boom or the low-flying jets. Property damage already has been experienced by valley residents of broken windows, cracked walls of homes and buildings, including those of the school house, broken and falling tile and plaster, walls crumbling and foundations cracked. With these unstable conditions, the value of our properties will drop to nothing. With this airspace expansion, the high density of aircraft that will be operating over this populated area, puts our lives, our livelihood, and value of our properties in jeopardy.

In conclusion, we have shown some of the adverse effects this proposed training area would have on all Ibapah residents. The ranchers and their families, the Gosiute Indians, our livestock and our homes. Our valley will no longer be a valley of production but a valley of destruction if this proposal takes effect. The recommendation is to have the Air Force review their plans for the restricted area and withdraw their request for the proposed training area. The military should consider alternatives to the proposed action, rather than subject people of the Deep Creek Valley, the properties of the Deep Creek Mountain area, and the bordering Nevada west hills, to the devastating effect of air-to-air supersonic combat training by the Hill Air Force Base F-16 Fighter planes. I thank you.

Colonel Casari: Thank you Mrs Bateman. Mr George Douglas.

Mr George Douglas: I live on the other side of the mountain, Callao. I'll tend to be brief. I think it's interesting to note that the Nevada Congressional delegation has representatives here but I don't see any congressional representatives from the State of Utah and we're meeting in Utah. How come they can't bother to get someone here and Nevada people can?

(At this point, it was pointed out to Mr Douglas that there was a contingent of congressional people from Utah who were present at the meeting.)

I feel that those of us who live out here already put up with enough harrassment from the Air Force on this. Over where we are, we have cruise missiles crashing in around us. These low-level flights, and so on, and I just want to go on the record that I'm adamantly opposed to any increased flights, and especially this supersonic stuff.

Colonel Casari: Thank you sir. Mr Paul Baker.

Mr Paul Baker: My name is Paul Baker. Around 1873 - between 1873 and 1876, a treaty was signed between the whites and the Indians. One of the promises was that the government would leave the tribe alone if they lived in peace. We have lived in peace since then. Now the government has gone back on its word - promises and word by wanting to use our reservation as part of the

testing range. The government is wrong by telling the Air Force to extend their testing range over the Gosiute Reservation which is part of the valley. The Gosiute Reservation is part of the Ibapah Valley; therefore, I am against the Air Force using our valley for testing their jets over our peaceful valley. I believe the people feel the same way as I do. Thank you.

Colonel Casari: Thank you very much, Mr Baker. Mr Randy Freston, I believe it is.

Mr Randy Freston: My name is Randy Freston. I represent Juab County. The Juab County Commission asked me to be here. Yesterday, we attended a public meeting in Callao and, at that point, the commission was informed that this meeting was being held. The Juab County Commission would like to go on record stating that they have received no notification of this meeting or a copy of the Environmental Impact Analysis at this time. One of the residents, Mr Garland of Callao, give the commission, myself, a copy of this document yesterday. That is possibly a lot of poor communication on our part as a county, but we are lacking on that document at this time. The County Commission asked me to state that they will have a formal statement to the Governor of Utah on November 12, and that should be forthcoming to you prior to the 16th. Thank you.

Colonel Casari: Thank you sir. I would like to announce for your information, that Senator Hatch, Senator Garn, and Representative Hansen do have representatives who are here observing these proceedings today. Mr R. Bargen.

Mr R. Bargen: I'm pleased to have the opportunity to talk to you. I'll be very brief and summarize as quickly as I can, a few major points.

First of all, I've been authorized by the Executive Director of the Nevada State Medical Association to publicly state that the Nevada State Medical Association, representing many thousands of physicians in the State of Nevada, are totally opposed to both the concept of supersonic operating areas over inhabitated areas of - certainly not opposed in any way to supersonic training or training the defense forces of the nation. The Nevada State Medical Association is opposed on the basis of documented and extrapolated effects on the health and welfare of human beings. That's the main concern.

Now, speaking for myself, as a physician and a pilot, the proposal at hand here stems from a proposal generated back in 1977. The first Draft Environmental Impact Statement for the Morency Supersonic Operating Area had to be withdrawn and revised under the terms of the National Environmental Policy Act, because it was a scientifically meaningless document. The revised document that came out of Morency, New Mexico is this document (showing document). Everything that you have in your document for this DEIS is out of the documents for Valentine, Texas and Morency, New Mexico. There's a little bit that's pertinent to Nevada but the general concept certainly has been developed before, and everything everyone has

said here tonight is in the previous document. The reason the people of Morency are facing the F-15 and a supersonic operating area over their country is because the F-15 was taken into Holloman Air Force Base on the basis of a beddown statement which stated that the total operations of the F-15 would be conducted over White Sands Missile Range, unhabited areas, and no further areas would be needed. Their Environmental Impact Statement or the draft, states that due to increased usage of White Sands Missile Range due to other defense-related projects, we now need to expand our area.

The reason the F-16 went into Hill Air Force Base was on the basis of a beddown document which stated they would conduct their maneuvers over unhabited areas. The reason that they now want this area is on the basis that the previous areas are too busy and so on and so on.

What we're faced with and the Navy's proposal in Central Nevada is a need by the military to conduct certain types of operations which, unfortunately, by their very nature result in the violation of certain constitutional rights of the citizens of this country.

Colonel Casari: Two minutes.

Mr Bargen: Unfortunately, because of the lack of response from the military, people who consider themselves patriotic are

forced to defend themselves against this by whatever means they can.

230 To sum up a lot, the Draft Environmental Impact Statement for Gandy Supersonic Operation Area is a scientifically fraudulent document. There's no question about it. A book could be written about this document and it should be thrown out and a revised statement made at best. 230

Secondly of all, the hearings that you are participating in are to comply with the requirements of NEPA of 1969. That's all. You should not expect anymore, and unless you're going to do something else, you can expect these areas to be instigated.

I'd like to also tell you that - some of you know we have a preliminary injunction pending in Federal Court in Reno for Nevada. An amendment was recently submitted which included this area. It was accepted by Judge Thompson so that if that case is won, the question becomes moot. In other words, the Air Force would not be allowed to do what they propose to do here regardless.

231 Finally, I would like to read you a very short paragraph from a paper done by Galloway, who's quoted in this document. There are far too many things to say here, but he simply says that this is a document, Bolt, Brannock, and Newman Report 4952, it's quoted in the Draft Environmental Impact Statement. "The effects on People. Where meaningful data base does not exist, we are forced to comparisons in which we attempt to infer equivalencies 231

in environments through the use of stimuli descriptors that are expostulated to provide equivalent response measures. This is largely the situation for human response to sonic booms." What he means is that we know how bad it is now; we don't know how bad it's going to get. And this is William Galloway, a very respected person who is instrumental in helping design the supersonic operating ellipsis which the Air Force and the Navy will be using for attempting these projects.

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There's many other things to say, but that's fortunately - unfortunately all I have to say.

Colonel Casari: Thank you very much, sir. Mr Milton Hardman.

Mr Milton Hardman: I want to thank the Air Force for this because it gave me a chance to go through it. I would like to go on record as saying that I feel like the document is not complete. Also, I think there has been some deliberate misleading in the document. I'm not going to take time to go through all of them. I would like to share one of them. It's on page 29. It's dealing with the population.

It's quite interesting that in this statement, they left out Callao, but in their reason not to use Lucin, they incorporated Montello and Grouse Creek which was on their border. You know, when you add two cities, that changes your population drastically.

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Again, many things have already been said that I don't need to repeat, but I do agree with that which has been said. As far as this Lucin area being closer and cheaper for the taxpayer in the long run. Also, it is even less populated than what we are. 54

I don't see anything in the Environmental Impact Statement that tells us about the growth of the area. Are they aware that Wendover is no longer a thousand people; they're pushing two thousand, and in the next five years, they plan to be to 11,000? The casinos have already let the contracts out, they're already building the foundations of several of 'em. It's a real fact. Even though they're not in the main corridor, they will have a great impact on our area for population. 4

It also, in the Impact Statement, I see of nothing that tells of the history of this area. I don't propose that this would ever happen, but do they realize that this valley has had anywhere from two to four thousand people in it? All you'd have to do is get gold up to $800 an ounce again. Vegetation. In the statement it says nothing that there's any crops out here. Somewhere along the line I guess they've missed - I've got over 400 acres under cultivation now. They say that - it also states that our crops, as far as the State of Utah are concerned, are unimportant, and I think that's quite a statement to make. We raise quite a few cows around here. It also says in the statement that we are dominant sheep. Maybe we are. Maybe the cattlemen can set me straight. 233 4

but it seems to me I see more cows than sheep. They talk about these items. They also misinterpret, and they have made a mistake in here. They call the city of Ibapah "Goshute." If they had ever been out here doing this physically, I don't think the mistake would have entered into the document. They talk about the golden eagle and the bald eagle. At low level flights that they do over my house, I am surprised you don't have more accidents picking up eagles in your intakes.

Colonel Casari: Two minutes.

Mr Hardman: I want to go on record to say that the time that I have lived here, they have come within 30 to 40 feet of the cedars that are on my hill; they have had to swing up so that they do not hit my power lines that go to my pumps which are 50 feet off the ground. The Air Force themselves, teach us that when a guy is working on a piece of equipment, the last thing you do is to go up and to clap your hands, make a loud noise, or startle the man. That's how fingers are lost, and having lost my finger before, I appreciate this safety rule. If you are working on a piece of equipment and a sonic boom or a fast-moving aircraft comes at a low elevation, if your head's under something, you get an awful sore head. If you happen to be working next to a piece of equipment that's operating, an arm, a leg, or etc., could be lost extremely easy. We are in an area that we do deal with machinery.

It's not a safe factor. It doesn't say anything about the possibility of increased farming in the area. I have talked to many people who have big ideas, hopes that they can go into farming into large acreage. We're not talking in the hundreds but in the thousands. If this occurs, we do have plenty of water; we have plenty of good ground; it's a possibility. Here again, affecting the future, and I see nothing in the statement that talks about it.

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I would like to also reiterate the fact of school kids. My kids go to school. Everytime there's a sonic boom - boy I just loved that when I was in school. You got another 15 or 20 minutes of school that you didn't have to pay attention to the teacher while you settled down. If they constantly happen, I do think that it would inhibit the education of my children in the school.

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It also states in here that they have not made any studies on the human effect. How can we go ahead with a project with no long-term studies of what it can effect in the human responsibility. For example, we're just now, many, many years later, finding out what radiation can do. Many years down the line, what is sonic booms going to create? Are we going to have a mass of people that are shell shocked? I think that the study's got to go first. It seems to me like it's incomplete and I would like to find the truth of the matter out before anything takes place.

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It talks about here, as far as studies regarding land area and masses, and the importance of the ground. It so states that our ground out here is unimportant. I would like to have them

know that ten years ago it took eight acres - or we had eight acres to feed a person, we are down now to just a little over four acres to feed a person. If we keep going and we keep consuming farmland, we're going to be in trouble as a group, or as a nation, and it'll be far more serious than just the sake of a impact statement. We need to look at the future.

I want to thank you for your time.

Colonel Casari: Thank you very much, sir. Commissioner Stromberg, would you wish to address some remarks to the group?

Mr Charles Stromberg: Commissioner Charles Stromberg, Chairman of the Tooele County Commission. I'd like to make a statement that the commissioners have received a petition signed by the people of Ibapah and Callao in this area, and we strongly endorse that petition which is against the development of this new area, and I just want to say that I hope that when we, on county government, hold a public hearing, we hold the public hearing to get the input of the people and we make our judgment on what we find at that hearing, and I sure hope that the judgment is going to be made on what they hear from the public in this hearing, and also the one at Ely. And I still want to stress that I think that Air Force - maybe their words speak louder than their actions because if you hear them today that they don't make low-level flights - and I've known many people out here in Ibapah for many years, and I know

they don't lie. They're a high caliber of people and they tell me of experiences that they've almost had to jump off their horses in order to keep from being hit, that they come in so low. And I think that the people here don't trust the Air Force or a lot of the military people and I think that's one reason why you're getting so many negative comments is because, I think the actions has been speaking louder than their words and so I want you to know that Tooele County Commission is wholeheartedly endorsing the petition that's against this expansion.

Colonel Casari: Thank you Commissioner. I have asked to speak all those who have previously registered. Now I know we're past the time but I don't want to prevent anybody who may have not registered to speak from having that opportunity. So I would ask, is there anybody else who has not registered and has not spoken who would wish to speak?

Yes ma'am, in the back of the room. (Her comment was unintelligible.) Certainly you may. Would you come to the front, if you would, identify yourself for the record?

Deann Harris: Yes. My name is Deann Harris and we live in what's called Uvada. If this is Ibapah, then we live right here (indicating on the map), right on the Utah/Nevada border. There's four ranches there. Also, down here, past Callao, there's Trout Creek, Partone, and Gandy, and there's not any representatives here from those people because it's too far to travel, school

was in session. There's no school mentioned in the Environmental Impact Study in that area. There's not any mention of a lot of people living in here. We have 120 I know for sure, if not 140 people, not counting Callao and not counting Ibapah. Just in this area. Gandy people said, "Oh, it won't bother us. We're not included in it." I said, "Do you know what it's called? It's called "Gandy" whatever. Supersonic airspace or whatever you want to say, and the people soon come to realize it wasn't brought up; people didn't know this was going on. They didn't know it's going to affect them. But everybody can't solve what they're doin' to come here and voice their opinion. But I know, personally, we have been working as a community to write to our senators, our congressmen, our representative, letting the people know we are concerned. We've only lived out here two years, but we're buying a ranch. What, if ever, we have to sell that ranch? What're we going to do? Our ground will be worthless. We had visitors in the summer come, little kids from Arizona, and it was one week that it leaked out that the Air Force was going to have a testing in that area. We was at a reunion and my husband heard it from someone and it passed out - anyway, during that whole week they were having their testing flights. These little kids would hold their ears and scream and run and cry. This is subsupersonic stuff we're experiencing now. What's going to happen when it becomes supersonic? All I'm saying is as I'm an individual, my

family's important to me, the place I live is important to me. And maybe I'm not a high official and an important person in the city, but I matter. And I hope that they'll realize that the people out here care, and we hope that you'll see, even though it isn't a populated area, we choose to live out here. It's a beautiful country. To be able to look out and see deer and antelope, hear the coyote at night howling in your back yard, to see the vegetation and the beautiful wild flowers, to hear the calm, peaceful feeling and then, all of a sudden, have a boom hitcha. We take it now, what's goin' on. That's we have to take. But please, hear our cries, hear our voices. We don't want anymore. Thank you.

Colonel Casari: Thank you Mrs Harris. Is there anyone else who has not spoken who wishes to speak? Apparently not. Permit me to thank the people of Ibapah for permitting us to use these facilities and particularly to Mr Steele, who went to such efforts to help us set up. Thank you also to all of you for your courtesy in helping us to conclude at a reasonable hour. The meeting will adjourn.

Excuse me, I might announce to you once again, as a reminder, that you have until the 16th of December to get your comments, any written comments you may wish to submit, to get those in by that date. Thank you.

Hearing adjourned at 1725.

The hearing at Ely, Nevada commenced at 1910, 30 November 1983.

Colonel Casari: Good evening, ladies and gentlemen. First, if I may intrude just a bit on your time, may I say that people of Ely and environs can be justly proud of the fine facility in which we're fortunate to meet this evening.

A welcome to this, the second of three scheduled public hearings on the Draft Environmental Impact Statement on the proposed establishment of the Gandy Range Extension and adjacent restricted airspace as an area of supersonic flight training. Now, hereafter, I'll refer to this matter simply as the supersonic flight training proposal for easier reference.

I am Colonel Guido Casari and I am an Air Force Trial Judge stationed at Travis Air Force Base, California. My sole purpose here, my role, is simply to conduct this hearing, to maintain a fair and orderly procedure, and to insure that the time limits are followed as closely as reasonably possible. I have not been involved in the development of the supersonic flight training proposal or the Draft Environmental Impact Statement on that proposal, and I will not be making any recommendations or decisions concerning the proposal.

Now first on the agenda this evening is an explanation of the supersonic flight training proposal and the Draft Statement. Lieutenant Colonel Joseph Winsett, the Briefing Team Chief, will introduce the briefing and the two other briefers, Mr Larry Davis

and Mr Keith Davis. Following this presentation, statements and comments from government officials will be received. The order of speakers will be elected officials first, or those representing elected officials, followed by official representatives of federal, state, and local government agencies, if any. Statements and comments or questions from the public will then be accepted. All speakers are asked to limit their comments, statements, or questions to five minutes so as to permit as many as possible of those who wish to speak this evening to do so; that is, within the projected two hours of the meeting. I will give an oral warning when the speaker has two minutes remaining to permit him to sum up. In certain instances where I know the length of the statement, I will not do so and I will not do so for public elected officials.

Now to give equal opportunity for all attendees to speak, we requested before the meeting that those wishing to speak fill out a card which is available at the table to the rear of the auditorium to my right - to my left, I beg your pardon. If you have not already done so and wish to do so, you may do so now. Speakers will be recognized from the floor only if time permits, and after all those registering to speak through filling out a card, have had an opportunity to do so. If time does not permit you the chance to speak, and I will strive to avoid that, you may certainly submit written comments or statements. This may be done by presenting such documents to me or to Mr Murdock who

is assisting at registration who is standing at the rear of the room at the registration table at the present time, or by mailing them the following address at Wright-Patterson Air Force Base:

HQ AFLC/DEPV
Wright-Patterson AFB OH 45433

and, of course, I would be pleased to provide any of you who wish that address to you individually. Now you have until 16 December 1983 to get your written comments in. That date also marks the closing of public comments on the Draft Environmental Statement.

We have a tape recording system in place. A verbatim transcript of the entire hearing will be made. Now to insure that your comments are recorded, it is essential that you speak directly into the microphone which is located at center of the auditorium in front of the stage.

Any question asked, or comment or statement made during this hearing will be formally considered and addressed in a final Environmental Impact Statement. Even if your questions or observations cannot be or are not responded to here tonight, you may rest assured they will be addressed.

I am privileged to note of the presence at this meeting of Congresswoman Barbara Vucanovich and of representatives of the congressional delegations of the states of Nevada and Utah. Many have traveled here from Washington DC for this hearing. I'm also

privileged to note the presence at this meeting of Miss Linda A, Ryan, Director, State Office of Community Services, State of Nevada, representing your governor, Richard Bryan. And I'm also pleased to recognize the presence here of Mr Brent Eldridge, Chairman of the White Pine County Commission, who will be speaking later but will be speaking solely as a private citizen and not in behalf of the county. I also note the presence here of Dr J.K. Jones, Vice-Chairman, White Pine County Commission, who will be addressing you formally for the county. And also, we would wish to note the presence of Mr Wayne Cameron, a Commissioner of White Pine County.

We welcome all those whom I mentioned and all of you to this meeting.

And finally, one administrative matter, I'm asked to announce that this is a public meeting. Smoking is permitted only in the lobby.

Colonel Winsett.

LtCol Joseph Winsett: Thank you Colonel Casari. Good evening ladies and gentlemen. Our presentation tonight will be by viewgraph and we're going to ask that the house lights be dimmed during the presentation so that, hopefully, all of you can see this map that is on the screen. If for some reason, during the course of this presentation, we are not clear in a term that we are using, such as a military operating area, or use some acronym that is not familiar to you, please call that to our attention. Also

if you cannot hear what we are saying, please call that to our attention. But again, we would like to give our proposal first, and then as the proceedings continue, that is your opportunity for your comments and your questions and we will do our best to try to answer those questions.

At this time, I would like to introduce two individuals that are with me tonight. Mr Larry Davis is the Chief of Tactical Operations concerning activities on the Utah Test and Training Range, and he will be outlining and briefing this proposal concerning supersonic flight. Mr Keith Davis is an environmental engineer from Hill Air Force Base and he will discuss certain things pertaining to the Draft Environmental Impact Statement. Both of these gentlemen are employees of the United States Air Force. So at this time Mr Larry Davis will present to you the Air Force proposal.

Mr Larry Davis: Could we have the lights out please? (Lights were turned out.) Now before I start, I would like to go into the color coding that we have on this chart and where the various cities are located.

We have Ogden, Utah up here; Hill Air Force Base; Salt Lake; we have Tooele; Delta, Utah; we have Ely, Ibapah, Wendover, and Elko. Now the area that you see outlined in red in the North Range and also this area down here in the South Range, this is called a MOA, or a military operating area. What this means is

that military aircraft can operate in this MOA along with general aviation. In other words, it's a see and be seen environment and you don't have to ask permission from anyone to go through it.

Now the black cross-hatched area is the current supersonic area that we now utilize. The area that you see marked in yellow is the area that we would like to designate as supersonic area.

Now the reason that we need this is, back in 1978 we knew that we were going to be changing aircraft at Hill Air Force Base. We had the F-4 at that time and the F-4 could go supersonic but it took a great deal of effort and it also took a lot of gas. We knew that in a couple of years we would be changing to the F-16 and the F-16 being a much smaller aircraft, having a larger engine, could go supersonic very easily; therefore, we realized at that time, that this supersonic area that we have here would just not do the job.

Another area that was driving this is that we would soon be picking up what we call an air combat maneuvering instrumentation system. Now this system is simply a system that would be installed out here on the range that can teach pilots how to dogfight better, or how to do better air combat maneuvering. Now this system is designed with 16 instrumented sites that are located on the ground in this position. With these 16 instrumented sites, we can see everything that's going on out here on the range in three-dimensional form. This information is then sent to Hill Air Force Base and

anyone up there can go over to Building 3, which is a special building and inside this building, you can sit down in front of a video console and you can see everything that's going on out there at the range. Now, what this means is that when the pilots from Hill fly out into here we can also have the other pilots that are evaluating their performance sitting over in front of these video consoles and they can see everything that goes on. They can see all the mistakes that are being made. And also, all these engagements are all video recorded. When the pilots get through out here they can go back to Hill, they can land, get with these other pilots that are the evaluators, and they can see all the mistakes that are made. So it's an excellent training device.

Now, why do we need the MOA? When we were planning where to locate this air combat maneuvering instrumentation system, we wanted to take advantage of the supersonic area located here. Now the problem is, that when the pilots are up flying, when they're turning toward the east, they don't have to worry about trying to keep the aircraft under supersonic speed. They can now concentrate on their opponent; however, when they turn toward the west, now they can't concentrate on their opponent. Now they have to be worried about flying the aircraft, and now they're looking at the gauges; therefore, they really can't train in that aircraft the way it was designed to fly.

Another problem that came up, we were looking at locating it over in this area and we have Dugway Proving Grounds located over here. They're also in the airspace, and they've got some very delicate equipment down there; some sensitive instrumentation.

And so that was a problem. We looked at locating it up in the North Range in this area. We have an air-to-ground scorable gunnery range called Eagle Range located on the eastern end of this range, and that kind of prohibited the area. The other problem are the airways that run through the area. In other words, these are the airways that you can see going between the towns, and these airways were established by the Federal Aviation Administration. As you can see they honeycomb the area up on the North Range. And so that's why that we finally ended up having to locate it down here on the south portion.

Another driving factor is that a lot of our scorable air-to-ground targets are located over here. We have two main missions at Hill Air Force Base. We have the air-to-air mission that we just got through talking about, which is air combat maneuvering, and we also have the air-to-ground mission. And this is when the aircraft take off, they go out on the range, and they roll in and strike the targets by dropping bombs or shooting guns at them. Since the targets are located on DOD-owned land in this area, in order to fly simultaneous missions; in other words, to fly our ground attack missions over here, it was necessary to locate the air-to-air arena over on this side. So that was another driving factor.

Now, why locate everything so close to Hill Air Force Base? In other words, why couldn't we go to another range somewhere across the United States? Why not do it out over the ocean?

There are two factors. The F-16 is very limited on fuel, It only carries about an hour and twenty minutes worth of fuel on board and if it takes ten minutes to get out to the range and ten minutes back, that means they only have an hour's worth of training. Another factor that was involved, is when you're talking about air-to-air combat maneuvering, it's something that needs to be done on a day-to-day basis. It's not something that you can go out and do for two weeks and then not do it for three or four months. It's something that you have to continually work at. So that was another problem driving it into this area.

Now, when we talk about the DEIS, the Environment Impact Statement, it talks in there about 30 to 38 booms reaching the ground - sonic booms reaching the ground on a given day. This is the worst case. When they devised that statement, by regulation, they had to present the worst case. Now there are occasions out at Hill Air Force Base when we do invite other units from across the United States. We may have 50 or 75 aircraft in there for an exercise. And that's normally during the summer months; normally maybe several weeks out of that time period. And during that time period we would be exposed - or we could, possibly have 30 to 38 booms reaching the ground. Under normal conditions, and this would be most of the time, we would only expect to experience approximately eight sonic booms reaching the ground on a given day. And even then, we may - some person down here may only hear one or two; another person may only hear one or two up here. In other words,

they would be spread out over the entire area. When these booms would originally be initiated at approximately 20 - between 20 and 30 thousand feet. The reason for that is when they start their air-to-air maneuvering, they would start it in this range and as they approach each other, that's when they would have the highest speed on the aircraft. Once they pass and start turning and twisting, then the speed drops off very quickly to subsonic airspeed. We would also have a 5,000 foot buffer zone out here, extending from the surface to 5,000 feet above the ground and that would be to dampen the sound of the sonic boom.

The last item - this would have no impact on commercial air carriers going in and out, out of Ely. Now I have Keith Davis who will now be talking about the environmental impact of sonic booms in the area.

Spectator: Colonel Casari, could I ask a couple of questions?

Colonel Casari: Can we wait sir, until the conclusion of the briefing and then --

Spectator: He has it on the board now.

Colonel Casari: Very well. Do you intend to leave that on the board as is?

Keith Davis: Yes.

Colonel Casari: I think others are going to be placed on. Let us complete it. Put it back on and then we'll take the question sir.

Keith Davis: As was described before, this area is already used heavily by the Air Force so we're anticipating the primary impact from this proposal are the sonic booms that would be created with the additional speed. Basically, the areas that we've looked at in the impact statement that we've tried to address - the areas we've tried to address in the impact statement are shown in this slide. Primary and foremost - the impact on people. The Air Force has looked at some 92 instances or studies where people have been subjected to sonic booms, often in intensities much greater than we anticipate in this case. There's never been an instance of - a recorded instance of a personal injury. They are definitely an annoyance. We've spent a large amount of time in the impact statement trying to evaluate that annoyance. That's a very difficult thing to do, but we feel it's acceptable.

The impact on animals. Again, there has been no recorded instance where there has been injury to animals at the pressures we're talking about in this case. The aircraft will be, at all times, above 5,000 feet, primarily around 20,000 feet above mean sea level. There have been studies on beef cattle that have shown no change in productivity, as well as with dairy cattle.

Impact on structures - again, the sound levels we expect to be producing should not impact structures. There's been a study performed by NASA that showed that they gave a reading of eleven pounds per square foot as being any well-built structure withstand with no problem. We're probably looking at two and a half pounds per square foot to a maximum of five to six. So we should be well below that. There may be slight probablities of breakage of windows and plaster. Those would be the items that might be affected by a vibration.

Impacts on terrain - again, there's been studies that show that there should be no significant impact on mining operations or any landslides caused by type of presssures we're dealing with.

Impacts on area economies and land use - the Air Force is involved in a study to look at four locations that are now located under supersonic training area. They looked at general economics - mining, cattle industry, land values. They found no significant change because of that supersonic training area.

Again, those are the areas we tried to address. We would certainly be happy to hear any comments or whatever on those impacts.

Very briefly, I'd like to give you a history of where this impact statement has been. As mentioned earlier, it was originated in June of 1978. The Air Force at Hill Air Force Base prepared an environmental assessment at that time, channeled that up through Air Force Command. Air Force determined in 1980 that an Environmental

Assessment format was not comprehensive enough to address this issue. They determined at that time that they wanted to upgrade it to a Draft Environmental Impact Statement. In August of 1980, we published in the Federal Register, a notice of intent to prepare such an impact statement; we released news articles on it; we sent notifications to state and federal agencies. Any response or anybody that indicated an interest at that time immediately was put on our mailing list and, in August of 1983, that Draft Environmental Statement was released to the public. The mailing list included state and federal agencies, everyone that expressed an interest, and then anyone that called in subsequent to that asking for a copy of the impact statement, we mailed out. Because there was a large outcry, primarily from Nevada, that they didn't have enough time to comment on this Draft Impact Statement, the word hadn't gotten out fast enough, we extended the public comment period to, now it's 16 December, and we scheduled public meetings for this week.

The comments and concerns that are addressed in the public meetings and the hearings, the written comments, we will try to incorporate them, try to address them. We will formulate a final Environmental Impact Statement. If the Air Force then decides that they want to press forward with the proposal, that final Environmental Impact Statement will be released again to the public for additional comments. At this time, we don't think that will happen

in the near future, at least not for a few years, maybe. That could go faster. We just don't think it will. And that's what we had for a formal briefing. I guess we'd like to --

Colonel Casari: Would you please restore the slide that was on? I believe we had a question from --

Spectator: I have two of them about the MOA.

Colonel Casari: Would you please come forward sir, and speak into the microphone. Thank you very much. You may state your name for the record.

Virgil Field: I'm Virgil Field. I'm representing myself but I am also a member of the FAA.

Colonel Casari: Certainly. You may address --

Mr Field: The question I had - you stated that the civilian aircraft could go through there anytime, through the MOA. Is that not correct?

Larry Davis: That is correct.

Mr Field: But I understand they restrict IFR aircraft from going through. So IFR aircraft cannot fly in the MOAs when they are in use.

Colonel Casari: May I note to those who are responding, that their answers must be recorded as well so they should also approach the microphone.

Mr Field: Okay, I'm sorry. Instrument flight rule aircraft is like your airliner which is on one of these prescribed routes up here, and I was also going to question - some of those routes - I have seen a proposal that some of these routes are going to be changed to avoid the restricted areas, or rather the present MOAs.

Larry Davis: Yeah, first of all let me respond to that first question. A military operating area is a VFR area and that means that you operate in that area under VFR conditions. It's also a warning - kind of a warning - to general aviation that there is high density military traffic going on in that area and so that's why it's a VFR, it's a see and be seen environment.

Now the other proposal that he was talking about - this will not change the MOA at all. In other words, we're just asking to go faster in the airspace that we already utilize under this proposal.

Mr Field: Well, my question sir, was, I have seen a proposal that the one airway that goes from Wendover to Salt Lake - and I see it's already been eliminated on your chart, but it went to Provo previously, and that has been removed from your chart on this - it was an airway. And I was wondering if these other airways would be involved.

Mr Davis: No sir, these areas right - the airways that you see right now would not be involved in this proposal right here.

In other words, these are the current airways that you see going from Ely up here to the intersection, over to Wendover, and then to Salt Lake, and they would not change. Everything would stay the same.

Mr Field: Just that one little red area (indicating on map), right there by that 9,9 which shows a transition area between your north area and Gandy. Is that to be considered part of an MOA or is that actually a quarter?

Mr Davis: This right here is a quarter and it's also a MOA, military operating area.

Mr Field: Will that affect IFR flights?

Mr Davis: No.

Mr Field: Thank you.

Mr Davis: Any other questions?

Elaine Pollock: Elaine Pollock. I'm in mining. Our company is located here in Ely and my husband flew back from Arizona to Ely this spring. There was a big thunderstorm and they were forced to use the other valley to get home. Now from what I understand, this will not be possible for private aircraft anymore coming in like that. You have to call ahead and then you probably won't get the clearance. I'm sorry. I think this is also going

to raise the rates at Sky West for us, which we do an awful lot of freight with, because they said their gas bill will be more which means our planes will use more to go around the boundaries they're proposing. Thank you.

Larry Davis: Okay, in answering the first question, this still remains a MOA out here. In other words, general aviation and military aviation can operate in this area. In other words, the only thing we're asking for, and I just want to emphasize it again, we just want to go faster in the airspace that we already utilize. Now as far as any impact on Sky West, it will have none. In other words, they can still use the same air routes if they decide to fly this air route over to Salt Lake, or if they want to cut across the MOA, whether up through this area (indicating on map) or down through this area, they can still do it. It will not have any impact at all on Sky West.

Spectator: (Unintelligible question)

Colonel Casari: Would you please indicate for the record what the question was. I believe the question was, may we quote you --

Mr Davis: Would you like to come up here for a minute?

Colonel Casari: No, this will suffice. the question is - may we quote you on the statement that Sky West will not be affected by this proposal at all?

Mr Davis: That is correct. For establishment of the supersonic flight training area in the military operating area, Sky West will not be impacted by that designation.

Spectator: (Unintelligible question concerning Sky West's rates.)

Mr Davis: Well, I cannot speak for Sky West's rates and their fares, and so forth.

Spectator: (Unintelligible question.)

Colonel Casari: Excuse me. If -- we have departed now from the rules, and I have permitted it because there was an acute interest in the particular aspect. I will permit this questioner to conclude but I want to - well I want to insure that the record is made. We must address any question raised. Would you state -- what was the question last posed?

Mr Davis: Well, it concerned, Colonel Casari, the rates that Sky West established, and so forth. I cannot comment on how Sky West establishes their rates and charges. Again, for the record, this proposal has no impact upon Sky West's operations.

Colonel Casari: Very well. May I ask that the lights be turned up.

Mr Davis: And ladies and gentlemen, I want to apologize for the awkwardness of this PA system and asking you to come up

and record your comments, but it's about the only way that we have of making sure that your comments are recorded and that we do get them in the record, so please bear with us.

Colonel Casari: And now, I am very privileged to call upon Congresswoman Vucanovich to address you.

Barbara Vucanovich: Thank you Colonel. I'd just like to tell everyone, I'm awfully glad to see everybody in White Pine again. It's just great being back here. Thank you all for coming out tonight, 'cause I think this is a very, very important thing for White Pine County and for our state. So I'm glad you're all out here and you're all going to tell what you're feeling about this situation.

As you may be aware, I requested these hearings earlier this year because I felt that the Department of Defense, and the Air Force in particular, had not allowed sufficient time for public comment, and I'm very pleased that the Air Force has agreed to hold these special meetings, and on behalf of all of us here in Nevada, I really want to express my appreciation to them for this special consideration. We're all here because we're concerned about too much of our Nevada airspace being restricted to military use. It's always been a problem in some areas of our state, but with this latest proposal, I must say that I believe the Air Force is simply asking for too much. With distances as great as they are in Nevada and with communities as isolated, air travel is an absolute

necessity. That need is not being recognized by the Air Force, in fact, the proposal before us would restrict so much airspace that general aviation travel to certain points in our state would no longer offer the signigicant time saving that it now does. This would increase the isolation of communities near the SOA and would represent what I believe is an unacceptable level of government control over our airspace. 237

This meeting is to discuss these and any other problems that we, as citizens, have with regard to this matter. I want to encourage everyone to speak up forcibly and to demand satisfactory answers to their concerns. And I personally have several questions and perhaps I could start off with those and, hopefully, we'll hear from some of the other people who are here tonight. I really would like to know that if this supersonic area - operating area - is established, will there be a floor below which supersonic flight will be restricted in order to lessen the impact on private citizens, general aviation, and livestock. And I know we've heard a lot of numbers, but I'd like to hear that. I've been out there. My husband and I are both general aviation pilots and I've been out there and I know that there are a lot of wonderful young men in the Air Force who are out there flying, but I know a lot of times they are a lot less than 5,000 feet. Believe me. I've had them below me and we don't fly that high in our 182. 238 239

I'd also like to ask, why can't the services consolidate supersonic flight operations so that this much airspace doesn't 240

240 Cont.

have to be taken up for the same purpose. We have a Navy proposal for a large segment of central Nevada. Nellis already has a large supersonic operating area, and when that operation - when that area is booked, supersonic training is conducted in Arizona, I believe. It seems that Nevada has already given its fair share and more for this admittedly important training.

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I'd really also like them to explain in more detail the type of training conducted and the need for the supersonic operating area designation. I know that there are loads of people who would like to speak here tonight so I will sit down and ask all of you to please express your concerns, because I do think that the Air Force would really like to respond to us and try to be helpful. Thank you very much.

Colonel Casari: Thank you Congresswoman Vucanovich. Also for your courtesy in observing the time. May I ask Mrs Linda A. Ryan, representing your governor, to address you.

Lt Col Winsett: Excuse me sir. For the record, if it is all right with you, may we defer those answers to the EIS? Thank you.

Mrs Linda A. Ryan: Members of the Air Force, Congressman Vucanovich, White Pine County Commissioners, and ladies and gentlemen, my name is Linda Ryan. I am Director of the State Agency designated through presidential executive order 12372, to review

the impact of federal activities in Nevada, and I'm here today on behalf of Governor Richard Bryan.

On October 15th, 1985, Governor Bryan forwarded Nevada's official comment on the proposed action for supersonic flight training being requested within the Gandy Range by the United States Air Force. This official comment clearly expressed Nevada's opposition to the proposed action. The Governor's opposition is based on the following four issues: (1) The anticipation of 125 sonic booms per day, 50 percent of which will reach the ground, is an estimate. No specific remedy is offered should the sonic booms which reach the ground, regardless of the numbers, sustain an impact severe enough in magnitude to detract from the quality of life in the area. (2) Since nearly 40 percent of Nevada's airspace is now under federal agency control, any additional airspace restrictions or restrictive reclassification will negatively impact on private and commercial aviation in Nevada. (3) Federal agencies are acting independently in their planning efforts toward proposed changes and ultimate reclassification of our state's remaining free airspace. (4) The Draft Environmental Impact Statement describing the proposed actions in the Gandy Range does not, I repeat, does not, address in any substantitive manner the statewide airspace impacts on private and commercial aviation in Nevada. Those are the issues which constitute Nevada's basis for opposing the Gandy proposal. Now we would like to submit additional information on each of the four concerns.

First, in relation to the issue of sonic booms, the quality of life for people living in the area must be given appropriate consideration. The Draft Environmental Impact Statement speaks to this issue in terms of estimates of the number of sonic booms with no provision for public recourse should those estimates prove to be understated. It is not reasonable to expect the residents of Nevada to accept the burden of this proposal without having prior knowledge of a daily maximum on the number of sonic disturbances, the severity of those distrubances, and a process for remedies should the disturbances prove to be detrimental. 241 241

Next is the issue of the self-imposed restrictions by private and commercial aviators in their use of military operation areas known as MOAs or M-O-As, as I call them, which are reclassified for supersonic flight training. It should be remembered that the Federal Aviation Administration, the FAA, designates MOAs to enhance airspace safety for all users. That is, the MOA defines specific airspace for military use while still allowing safe access under visual flight rules to private and commercial aviators.

However, comments submitted to the Air Force by the aircraft owners and pilots association documented in the DEIS for the Gandy Kange proposal strongly point to the fact that the see and avoid concept of collision prevention is not an effective method for aircraft operating at supersonic speeds. Thus, it is our contention, that when the Department of Defense reclassifies an MOA for supersonic flight training, it is, in effect, and for all

practical purposes, restricting that airspace. We are aware that the space will not be officially restricted, as the FAA does not regulate supersonic flight activity within MOAs. This point, however, is academic, since most commercial and private aircraft will not use those areas.

The third area of concern is that this proposed action will intensify airspace use in the area surrounding the Gandy Range. The Department of Defense and the FAA must consider the use of surrounding airspace in any reclassification effort. We need reliable data on the use of airways surrounding Nevada MOAs in an effort to evaluate the impact of designated space for supersonic training. This environmental review should consider the potential increases in the military use of the airways outside of the existing MOAs and the relative impact on the remaining free airspace.

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And finally, the Governor's major concern is with the historic trend toward the blocking of large portions of Nevada's airspace and the cumulative impact on the remaining airway corridors within Nevada. Experience indicates an increasing airway corridor encroachment through the expansion of one or more of the five existing major MOAs in Nevada. The reality of this encroachment on Nevada's free airspace is evidenced in the recently extended desert MOA in southern Nevada by approximately 20 nautical miles to the north as initiated by the US Air Force at Nellis. This reality is further intensified by the pending action of the Department of Navy's proposal to designate over 5600 square miles for supersonic flight

training within the Gabb and Austin MOAs. These actions, and the knowledge that airspace currently designated for military use in Nevada is surrounded by low-level military training routes and military air-to-air refueling routes bring us to the critical issue of the resulting impact on private and commercial aviation. If we had an accurate map of all MOAs, restricted areas, low-level military training routes, and military refueling routes in Nevada, it would be evident that private and commercial aviation are clearly threatened. The US Air Force, the Department of Navy, and other federal agencies proposing to limit use of airspace in Nevada, have a clear duty to evaluate all aspects of military use statewide. All of us appreciate and wish to accommodate the needs of the US Air Force; however, it is time for the Air Force to deal with us in terms of statewide airspace use. Addressing this issue on a limited, one bite at a time basis, is resulting in severe, adverse impacts on private aviation in a growing and tourist-dependent state.

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Even though Nevada is the forty-third state in terms of population, with less than one million residents, we have within our borders the twenty-ninth busiest commercial airport in the world. Nevada's potential for urban and rural growth, in relation to aviation access between communities and adjoining states, must be considered in any review process; therefore, it is our contention that the environment review process employed by the Air Force is inadequate to justify this proposed action. Thank you.

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Colonel Casari: Thank you, Mrs Ryan. Commissioner Jones.

Commissioner J. K. Jones: Representative Vucanovich, ladies and gentlemen, this is a position statement of White Pine County and is not intended to raise questions which I am sure were raised by other speakers in the audience.

White Pine County government is very concerned about your proposal to train supersonically over its land and its citizens and doesn't believe you've told us what the true consequences of your actions will be. We have, in White Pine County, all the values and uses you mentioned in the DEIS and more.

Many of our commercial and recreational uses you downplayed while citing studies which show average city noise levels having little or no affect on these activities. We don't see any correlation whatsoever between ambient noise levels in the cities and the sonic booms which could ricochet out there in the quiet of eastern White Pine County. At stake is the commercial and recreational use of that land. 244

I call to your attention the efforts of the Bristlecone Film Committee which has been in existence for about a year. Its primary goal is attracting the filming industry to our area. Several commercials have been shot here and several companies are serious about doing a larger production. As you could well imagine, no producer will spend money on a secluded site which is inundated with sonic booms. The proposed action will, indeed, adversely 245

affect the economy of our county directly. There may be only 550 residents living directly beneath the test area, but there are thousands more who use the area because of the character of the environment. 246

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The reasons for using the area the way we do are manyfold. Of importance equal to just daily access of hunters, trappers, prospectors, rockhounds, and casual recreationists is the experience in a nonurban setting. Those qualities in our environment would be lost, found contrary to your analysis. We say this because we believe only we fully understand our attachment to and enjoyment of the values here.

Presently, about 95 percent of the land in White Pine County is controlled by federal government. Our tax base is small, has been largely dependent upon the mining industry throughout our history, and if you implement this proposal, the effects will further reduce that base by literally running the scattered inhabitants off their mineral and agricultural land. We don't like that.

Air traffic is essential to the diversification of our economy and there is a definite adverse effect and impact upon nonmilitary traffic within an MOA when going from subsonic to supersonic as it relates to safety. General aviation and our air carrier will choose to not fly through that large expanse of air space after being rendered completely unsafe. We doubt that the transient or cross-country pilot will be given the access and clearances as promised to locals through the area when it's hot.

142 Because of the extra distances involved in avoiding the new super MOA, we are made even more remote. We suggest that you correct the DEIS to accurately portray the impacts from such an action as you propose. If you presently are forbidden access to the lower elevations for realistic demonstration of speeds of up to 2.4 mach, then we suggest that adequate data does not exist by which any of the impacts may be properly addressed. We don't believe that our people can bear the psychological effects of such activity and urge your recognition of that in the DEIS. We appreciate your coming to Ely for this hearing. Thank you. 142 247 247

Colonel Casari: Thank you commissioner Jones. I would note to you that we have some 55 speakers from the public who wish to address this group so it is important to adhere as closely as possible to the time limits so that we can conclude at a reasonable hour.

Mr John Kenneth Shanahan, I believe somebody is designated to read Mr Shanahan's statement. Are you Mrs Garrett?

Mrs JoAnn Garrett: Yes.

Colonel Casari: Please, Mrs JoAnn Garrett will read the statement.

Mrs Garrett: Mr Shanahan asked me to read this because his health doesn't permit him to do so.

Dear Sirs. Because of the state of my health at this time, I request this to be read during my five-minute block of time. I feel that before Nevadans consider allowing the Air Force to use Nevada airspace, they should consider how the Air Force has dealt with Nevadans in the past. I now reside in Eureka, Nevada but used to reside on a ranch about 20 miles east of Eureka. This ranch is located in White Pine County. I was forced to leave my ranch because the water system was poisoned, our animals died, our health deteriorated, the ranch was condemned and doctors told us to move out. I am convinced that blasting conducted by the military for MX purposes had a direct effect on the ground water my wells pumped from. The reason we believe this to be true is because our water system worked very well for four years but shortly after the blasting, our water system became contaminated. We have had our water tested various times with conflicting results, but everyone does agree the water is contaminated. The members of my family and I have gone to various physicians who all seem to relate our health problem to overburden of heavy minerals.

BLM reports stated all holes that were blasted were all later filled in so that no water from above ground could seep in. A sheriff's report and photographs in my possession show this to be totally untrue. Before blasting, we were all assured no blasting would be conducted any closer than five miles from all private property. In fact, the blasting occurred within a quarter of a mile from our private property.

I believe, before we allow the United State· Air Force, or any other government related group to enter Nevada in any way, we should receive more than empty promises and untruths concerning their functions in our state. I also believe these people should be held liable and take responsibility for the damages to property and life they inflict. Sincerely, John K. Shanahan.

Colonel Casari: Thank you, Mr Shanahan and Mrs Garrett, Mrs Garrett, you are next on the list.

Mrs JoAnne Garrett: I'm JoAnne Garrett of Baker, Nevada, and I live just south of the proposed supersonic freeway. I'm a member of the board of directors of Citizen's Alert on whose behalf I'm speaking now.

Citizen Alert is a statewide Nevada public education and citizen action organization that's been active for eight years in nuclear and public land issues. We first became aware of the Air Force's proposal, thanks to an article in the newspaper, about ten days before the comment period was scheduled to end on October 14. Without citizen action, local residents would not be having this opportunity to speak with you today, because there would be no public hearings. We are pleased to see that the Air Force is complying with the minimum requirements of the law, the National Environmental Policy Act. 248 248

Today, we'd like to focus on Citizen Alert's primary concern about this proposal and that is the gradual control of

Nevada's land and airspace by the military. According to the BLM's public land statistics of 1982, Nevada had 3,935,300 acres of land dedicated to energy and military use. This is 5.6 percent of the state's acreage; the highest percentage of any state in the union. From the MX missile to nuclear waste, to military airspace, the federal government continues to turn to Nevada to solve its problems. Nevadans have proven their partriotism by assuming the nation's burden for dangerous nuclear weapons testing. The nearly 4,000,000 acres just mentioned demonstrates the degree to which Nevada is already controlled by the military; yet, this Draft Environmental Impact Statement does not acknowledge the larger picture - the amount of land and airspace already committed to the military. And this has been mentioned by others here; and the Navy's current proposal to tie up 5700 square miles of central Nevada airspace. The Gandy proposal and the Navy's proposal, together, total an area almost the size of the state of Massachusetts.

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Citizen Alert believes that it is the responsibility of the citizens and the government of Nevada to question the impact of this proposal on our state and its citizens. The intrusion of sonic booms and supersonic flights over land not controlled by the military is unnecessary in a state where nearly 4,000,000 acres of land is controlled by defense-related agencies. The alternatives to the proposed action are presented as if there were no alternatives. We don't believe it. If the airspace under consideration were off limits, we believe the Air Force could find an SOA over

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military controlled land that would not infringe upon the lives and livelihoods of rural people. The military branches and defense agencies should cooperate and not compete to find alternatives to expansions of SOAs. In addition, the DEIS doesn't adequately address the long-term sonic boom effects on humans and wildlife. The studies cited in the DEIS were mostly conducted by the government, most deal with sonic booms of much less magnitude than those that are proposed --

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Colonel Casari: Two minutes.

Mrs Garrett: -- and the summary of the DEIS that was sent out from the Air Force office makes the assumption that, "People beneath the area live at or below 5,000 feet mean sea level." That doesn't need commenting on.

Impacts of the proposed action on the local economy, including ranching, tourism, business and economic development are inadequately addressed, if at all. The DEIS ignores the wilderness studies areas under or adjacent to the proposed SOA in Nevada, including the Gosiute Peak, Bluebell, and South Pequop. It minimizes the significance of the Gosiute mountains for bird migration when, according to the BLM, over the past four years about 5,000 to 6,000 raptors have been observed migrating south each fall.

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To conclude, Citizen Alert believes that this DEIS is inadequate. In addition, we oppose further supersonic operations area over land not controlled by the military. Finally, we urge

the Air Force to involve the public to the fullest extent possible as required by the letter and spirit of NEPA. And we thank the Air Force for the opportunity to express our concerns.

Colonel Casari: Thank you Mrs Garrett. Mr Joseph F. Griggs, Jr.

Joseph F. Griggs, Jr: I timed this at five minutes if I read fast.

I want to address three subjects. First, sonic booms. DEIS admits that they will probably be highly annoying to people who are subjected to them. In other places, the DEIS states that some people do not seem to mind sonic booms. It suggests that people need not be annoyed by them. It implies that people can get used to them if they want to. Where I live we already have sonic booms. My guess is about five per week on the average; occasionally, up to five per day. I find them annoying. They come from Mach 1 speeds, from 30,000 feet. An acquaintance of mine reported recently that a sonic boom caused large rocks to fall on him as he worked in his mine and he narrowly escaped death. Asking people to accept sonic booms is asking a great deal of them. It is not appropriate to treat the subject as a small matter. The DEIS does treat it as a small matter by saying that noboby knows much about them and that sonic booms will affect only a small number of people.

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Subject: Cumulative and Continually Increasing Impacts on Airspace used by Civilians. The DEIS, by omission, treats as irrelevant to the present proposal the current extent of use by military aircraft of Nevada and Utah airspace. To civilian pilots and their families, this is probably the main issue in connection with this proposal. The amount of restricted airspace in the two states has steadily increased over the years. A few years ago, a proposal to restrict virtually all of Nevada's airspace was dropped because of opposition to it from civilians. In the meantime, military aircraft use, in addition to restricted airspace, airspace which is not restricted, talking about MOAs here. The presence of military aircraft in nonrestricted airspace makes flying very dangerous for civilian pilots. They fly at elevations and at speeds that, according to FAA regulations, are illegal for civilian aircraft. I don't mind seeing military aircraft flying in the valleys and the canyons, and over the mountains, or even 100 feet above my house. From the ground, they are a thrill to see. They are awesome and impressive. Except for the sonic booms, I personally don't mind the noise either. But from the vantage point of a small airborne plane, the sight of them is a harrowing experience. After you've been through that once, it is impossible to appreciate the presence of military aircraft where you know civilian pilots and small planes are in the air. Recently, a neighbor of mine requested that the Air Force move its low-level exercise route ten miles to the north to avoid flying directly over the three airstrips in Baker. The Air Force

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graciously complied with his request. Within a short time, Navy fighters began using the old route right over the airstrips and have been using it ever since.

Time is approaching when the Air Force and the Navy are going to have to make some deals. Maybe the time is now. You want something, you want something more, what'll you give for it? How about signing on the dotted line that this will be the last request so that a few years down the road when all your personnel has changed, they will know better than to expect more. The resource is not unlimited. You are only Hill Air Force Base. We have Nellis and Fallon too. Now we have somebody training foreign pilots for dictatorships in the Middle East. Some people feel that a line should be drawn right there.

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Subject: Alternative to the Proposal. I'm not convinced that two of the alternatives mentioned in the DEIS have been sufficiently well explored. They are, relocating the supersonic flight requirement to some other airspace within the UTTR, use of distant supersonic flight airspace. Discussion in the DEIS of why these two alternatives are unacceptable is quite unconvincing and, for that reason, inscrutable to people who don't know much about the subject. We are asked to take it on faith that these alternatives are not feasible. At this point in time, that is asking a lot. I get the impression that the Air Force finds it inconvenient to consider these alternatives further. I do not believe that it is appropriate at this time for the Air Force to be talking to us

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about convenience. It is my opinion that these two alternatives, in some combination, and other alternatives not even mentioned, probably have a good chance of providing a more elegant solution to the problems associated with Air Force training plans than does the present proposal. From my standpoint, the Air Force is proposing to pound the Gosiute Indian Reservation with sonic booms for an indefinite period and proposing to use more airspace. The DEIS does not convince me that the Air Force has good reason to propose either one. I strongly suspect that the Air Force can find another way.

Colonel Casari: Thank you Mr Griggs, that was just about on the money. Mr Dick Holmes.

Mr Dick Holmes: (Mr Holmes displayed a map he had brought with him.) This is a composite map that I put together on my kitchen table, here. Two aeronautical charts. In the middle here we've got the state of Nevada, the state of Utah, Idaho, Oregon, California, and so on. This is the area that's been discussed tonight which is being proposed by the Air Force for a supersonic operation area. The area down here at Nellis, Barbara has already pointed out, is being used supersonically. And this is the 5,700 square miles that the Navy is proposing to use for a supersonic operations area in central Nevada. The significant thing about this to me, is the fact that these military operations areas here are only about 60 miles apart. This is the area up in the

Mountain Home area in Idaho. Again, maybe 30 miles apart. This whole entire area here - the reason I put this map together is just to give you an overall view of what is being proposed and the White Pine and the Gosiutes are not being singled out for the honor here. Thanks fellas. (Map was removed at this time.)

I'm delighted to see Barbara and Ace here tonight and Linda Ryan, representing the Governor, and Bill Farr, representing Chick Heckt. Thanks a lot for coming.

On several occasions, the Air Force and the Navy have insinuated that the authority to conduct their activities in our airspace resides in them and, that after satisfying the requirements of the National Environmental Protection Act, that they may operate in any manner which they deem appropriate, regardless of the consequences to any individual, but this is misleading. The sole responsibility for controlling the use of our airspace is invested in the administrator of the Federal Aviation Agency, who is appointed by the President and who operates under the directives and confines of the Federal Aviation Act. The adminstrator, alone, may designate certain airspace as restricted in order to confine hazardous activities and to protect nonparticipants, or he may revoke that designation. He may assign or revoke civilian and military joint-use airspace and military training routes. He may issue or suspend waivers of the rules which regulate airspeeds. He may confer with the Department of Defense or any other governmental agency about the desirability of taking these actions.

What he cannot do is abrogate or ignore the directions of the Federal Aviation Act, one of which clearly states that, when an aircraft activity, conducted in special use airspace, could affect the safety of persons or property on the surface, provision shall be made for their protection.

The Navy in central Nevada and the Air Force in Nevada, Utah, New Mexico, and Texas are now proposing just such an activity. Their stated justification for these trespasses is the need to prepare a national defense and each proposal is enforced with the written statement that there is no acceptable alternative, and with the oral extortionary threat that they will remove themselves and their economic support if the community frustrates their plans.

In recent years, the military organization has become so influential that there are some who view it as a fourth branch of government and not merely as an agency of the Department of Defense, and there are others who seem to feel that we can preserve our form of government by ignoring its laws. The administrator of the Federal Aviation Agency needs to be reminded of his responsibilities.

Our elected representatives should make every effort to assure that the various military units cooperate with each other and coorlinate their activities in such a way as to produce the least environmental damage, keeping in mind that the inhabitants of our sparsely populated areas also make substantial contributions to our national strength and character and are entitled to the same considerations as those who live in more populated areas. And, in

the final analysis, if it is determined that there is no possible alternative to destroying our habitat in order to provide a national defense, then our elected representatives should come to us and explain in convincing terms why this must be so and what provisions will be made to compensate individuals for property destruction and devaluation and for the disruption in their lives. And again Barbara, thank you very, very much.

Colonel Casari: Thank you Mr Holmes. We have been moving with, I think, a very good dispatch and I would propose, not as a reward but because it seems appropriate at the time, perhaps a five minute break and then we'll return.

(Hearing adjourned at 2020 and resumed at 2025.)

Colonel Casari: Come to order. Our next speaker is Commissioner Brent Eldridge who will be speaking in his own behalf and not on behalf of the county.

Mr Brent Eldridge: I'm Brent Eldridge, one of four brothers who, with our dad, mother, grandmother, and our wives and children operate a cattle ranch beneath the southern elipse depicted in the DEIS. I speak today for that family.

251 This DEIS has one major flaw which is evident throughout. It nearly ignores the proposed action's negative impacts upon the human environment while expounding incessantly on the need for the training area expansion. I won't argue with your statements of 251

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need for adequate training areas, but I take exception to chosen alternatives which are driven by inadequate environmental analysis. Before getting into the errors I see in this document, I'd first like to draw some comparisons.

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The present supersonic test areas and the proposed, when combined, would total approximately 6400 square miles. With the adjoining subsonic training areas also thrown in, the whole training area would total over 16,000 square miles for the use of one Air Force base. I note that the nation of El Salvador is one-half that size; the Falkan Islands, one-fourth; Israel, one-half; Lebanon, one-fourth; Kwait, one-fourth; and Nationalist China, seven-eighths. If, indeed, 16,000 square miles is a minimum size for the adequate training of American pilots, I respectfully submit that we must choose carefully where we have a war. In many of the smaller countries, there just ain't room. (Audience applause)

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Since the DEIS - is that knocked off my time? (Laughter.)

Colonel Casari: No sir.

Mr Eldridge: Since the DEIS addresses subsonic flight effects somewhat, I'll state for the record that we've seldom been offended by low-flying fighters over the last twenty years. In fact, we usually enjoy them. We support a strong defense, a military force that can stab, shoot, burn, strafe, and bomb with the best of 'em, but as you might surmise, we also strongly believe in our way of life and in the values embraced by all the people of

rural Nevada and Utah. We live here for definite reasons and those reasons are now in jeopardy. At 1.2.1, reference is made to a faulty EIS finalized in November 1977 in which the needs and impacts of the 388th Tactical Fighter Wing and others were underestimated. I understand that the same type mistakes in other beddown EISs for other locations are also now the justification for similar type expansions of training areas there. I feel that, indeed, once might have been an honest error, but twice would indicate to me a design to incrementally gut the western deserts. The people of Utah and Nevada may have offered different comment in 1977 had they been advised of the real impacts resulting from beddown at Hill. This DEIS seems only an effort to legalize what may have been, in 1977, and may still be, a violation of NEPA regulations.

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Also, in the summary, you note that the expected levels of overpressures are not known to cause any health hazards. You haven't said, however, whether they are known to <u>not</u> cause any health hazards. You should address the long-term effects resulting from loud, intermittent noise. Average noise levels in a city have little similarity to the proposed action. I recall a recent item on TV news which described the reaction brought about by an evening flight of the Blackbird over Salt Lake City. I continue to believe, until it's proven to me otherwise, that after living several years at 5,000 feet beneath your nominal sonic impact, the 350 people there won't be worth protecting.

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Following are errors or misleading statements made in the DEIS which indicate the overall inadequacy of the document.

260 | 3.1.3: An attempt is made here to depict the test area as an almost barren desert and that's very incorrect. Antelope, Deep Creek Spring, and Snake Valleys are some of the best livestock winter range in the Intermountain West. I know of no instance where the scattered grasses are not suitable for grazing. | 260

4 | 3.1.5.2: Agriculture is indeed an important land use in the area, contrary to your supposition. Native meadows and/or cultivated crops here are essential to almost every livestock operation affected by this proposal. | 4

261 | 3.1.5.3: An inference that mining will never be of any greater importance in the area than it is now is misleading. Sure, mining operations are now isolated and small in scale but that's true of any area before a decision is made to mine some new-found deposit on a large scale. The number of mining claims in the area attest to its mineral character. | 261

7 | 4.1.2.1 and the two following sections: You note that noise created by subsonic flight is insignificant. I agree. You could have also said that noise created by nearby supersonic flight is damn significant and I would have again agreed. But you didn't and I think you should. You mentioned the annoyance factor, and then moderated that. Ladies and gentlemen, the annoyance, the startled reaction inherent in all live critters is the issue. Either address its effects or demonstrate that, because of lacking or | 7

inconclusive evidence, it can't be addressed. I'd prefer prior to any implementation or further advancement toward your proposal be proved to the people of eastern Nevada and western Utah what really may be in store for us. It doesn't seem unreasonable to ask that you send your F-16s here for a few passes down each valley, west of the existing supersonic test area, at Mach 2 to 2.4 and 5,000 feet AGL. We'll then really know what the one-time impact is. I suggest Mach 2.4 because that's what the aircraft is capable of and if it's capable, we'll experience it. As you say in the DEIS, pilots shouldn't have to constantly monitor the airspeed indicator. Thank you for this opportunity to comment.

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Colonel Casari: Thank you, Mr Eldridge. Mr Charles Easley.

Mr Charles Easley: My name is Charles Easley. I'm speaking for myself. Being a layman I have just a couple of questions I'd like to ask the Air Force, and after a quick scan of the sectional charts for this area, for Nevada, I counted thirteen restricted areas, that's already restricted airspace. Realizing that Hill Air Force Base is outside the state, I would like to ask why can't they use these restricted areas that we cannot fly as private pilots in now?

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Secondly, I counted twelve - already twelve MOAs, this military operation areas. Why do we have to have a supersonic this close to us? You've already taken over the one south of us

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which is down near Vegas, and with the total number of routes, training routes, I would like to know how many square miles of Nevada space the military already had? Can you answer that? And why give us this mess next door?

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That's all I have to say Colonel. Thank you.

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Colonel Casari: Thank you very much, sir. As I noted, if there is any opportunity at the end and there is an answer available now, we'll try to get it in. If not, these matters will be addressed in the final EIS. Mr Edwin Robbins.

Mr Edwin Robbins: My name is E. H. Robbins. I'm from Dixie Valley, Nevada. What you people are gonna get, we already got, only different color. This is blue; we got gray. But I want to tell you you're not alone. The gentlemen up here need it for Hill Air Force Base. We were just down in Reserve New Mexico. Holloman Air Force Base wants Reserve. They have two places in Arizona. They have one down by Valentine, Texas. The Navy has a place in Yuma and Florida to train. It won't be very long before Mountain Home Air Force Base up in Idaho will want the Paradise MOA. If you'll start connecting everyone of these together, you'll find out what they're really after. It's just - you got the head of the camel under the tent now. Just wait till a little later on. This whole thing is gonna be one vast military operating area which they'll turn into a supersonic.

The Air Force, which I noted here, said - I believe one of these gentlemen did - that they didn't know of any damage that had been done to any individual or livestock by the sonic blasts. This is totally incorrect. When we were down at Reserve, New Mexico we talked to many people down there. An Indian out on the Papago Indian Reservation was thrown from his wagon by the US Air Force and a sonic boom. The wagon rolled over his head. He is now totally blind. To me that's - I just kind of wonder who they're protecting. If they're out to protect me, from whom are they protecting? When these people took their oath of office they swore to uphold and support the Constitution of the United States. What they're going to do to you is inverse condemnation. They're taking your land, the use that you have for it, without just compensation. 265 265

If they're saying that only one or two people are going to be annoyed by the sonic booms when they get to the ground, if that's the case why then they ought to take it to the biggest wilderness area I know of and that's Washington DC. And to only allow five minutes on a subject of this magnitude to the people here, because this is going to directly affect your lives, is absolutely ludicrous.

They state - I used to work for the Air Force. I'll put this down so it goes on the record. I worked for the Air Force for eleven years. I worked on electronic instruments. I worked on the F-111,I worked on the F-105, on the 106, and the 100. I did the armament systems on the F-111. I armed and disarmed that

aircraft. I did the pyrotechnics on it, So I have a little bit of expertise in it.

Colonel Casari: Two minutes.

Mr Robbins: I didn't get to work on the F-16. This is a tactical aircraft, air-to-air and ground-to-air. When they get in their three-dimensional mode, anytime this aircraft changes position in a supersonic mode, it will cause a super boom that will be up to twelve times the normal of what these people are telling you. It has the capabilities of blowing windshields out of cars. They did that on a test down in New Mexico - blew the windshield completely out of a station wagon.

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If you want tourism, you better think about this proposal. In Dixie Valle, to date, for one year we've 105 sonic booms, 41 buzzings, including one where they buzzed our school bus. The driver saw it coming; otherwise, she would have lost control of the school bus.

On March 2nd, the Navy did two tests with an F-14 at 5,000 feet, at Mach 1.5, to give us a register of what this would be like. The first was a straight and level flight and it was pretty awe inspiring. The second one, the pilot came over at the exact same speed, same altitude, but he maneuvered. He focused the boom. It put a 29-inch crack in our school house; it did $900 worth of damage to the sheetrock in my house. My wife - it took three days for her to calm down. She's a very even-tempered woman. I had to

put that in. You people are really in for hell. Really. Because this is only the tip. It's gonna get a lot worse. The aircraft - everyone of these aircraft want to come in like the Israelis do. They have the highest kill rate. Eighty to one is their kill rate. They came into the Bekaa Valley at AGL zero supersonic and destroyed the Syrian missiles. The Air Force is gonna go for that. If they say they're gonna tell you 5,000 feet, don't believe it. That surface-to-air missile would love to see an aircraft at 5,000 feet. The Navy has told us they want ground zero. Holloman Air Force Base in Alamogordo, New Mexico, the want zero but they said 5,000. If they can get 5,000, it's only a step down. They cannot control an aircraft in a three-dimensional dogfight. He's too busy after his adversary. If he doesn't get it they tell him when he gets home and he gets his tail end in the can. Geographical location doesn't mean a darn to him except to run into it. What you're gonna get is what we're getting already. So I'd advise you, real careful. Take a long look because your peace and quiet, your tourism, and your economy won't be here tomorrow. Thank you. 268 268

Colonel Casari: Thank you, Mr Robbins. Mrs Lucille Isbel.

Mrs Lucille Isbel: I'd just like to say, a few years ago, about 1980, I was going to Las Vegas and I was just below Caliente, and this plane, army plane, zoomed down and I thought he was going

to crash, and naturally, if I hadn't had a strong heart, I wouldn't be here now. But anyway, he was zooming my car and then he went on down a ways and he turned back and zoomed again and I swear he wasn't over 200 feet over my car. Now this is what we're going to have now.

Colonel Casari: Thank you, Mrs Isbel. Mrs Dorothy A. Schotz.

Mrs Dorothy A. Schotz: I would just like to share with you a short article from the --

Colonel Casari: Excuse me, one moment please.

Mrs Schotz: (The microphone was adjusted.) I would like to share with you, a short article from the December issue of Prevention Magazine. I'm sure a good many of you know this magazine. It's on our health.

Airport noise may cause heart disorders. First came news that excessive noise such as that from jet takeoffs and landings could elevate blood pressure. Now a new study shows that airport noise can directly increase the risk of death from cardiovascular disorders. Mortality statistics for 200,000 residents in two communities in the Los Angeles International Airport area were compared by University of California at Los Angeles engineer, William Meeken, PhD, and Research Associate, Neal Shaw. The test area was a region adjacent to the airport. The other community,

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similar in racial makeup, lifestyle, and social economic factors, lies directly south of that region. The only difference between the two areas was in the average exposure to noise. Drs Meeken and Shaw found significant differences between the death rates from the two areas. The data revealed that among residents 75 years of age and older, heart attack, and stroke death rates were 18 percent higher in the noisier region. A 60 percent greater incidence of violent death, including murders, suicides, and auto accidents was also reported among this age group. Also suicides among 45 to 54 year olds were double the figure of the quieter area.

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The noise from jets in the test area measured at least 90 decibals, a level at which industrial workers must wear hearing protection to prevent permanent damage. The excessive exposure to noise apparently produces a high degree of tension which, in turn, increases risk of high blood pressure. The fact that planes fly overhead constantly makes the residents angry, Meeken says. The combination of anger and fear may be a contributing factor to tension. Because older people are weaker, they are more susceptible to resulting disorders. We have dramatic increases in suicide rates within the middle-age group, Meeken says. My belief is that a similar pattern exists among other age groups but more research would have to be done to make the figures statistically significant.

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Colonel Casari: Two minutes.

Mrs Schotz: Thank you. While there wouldn't be the numbers and so forth, it still has a very grave relationship to noise.

Noise can be extremely annoying and I'm sure many of us agree to that.

Now there's just one question I have as a private citizen. With the type of war, please God, it's not going to come to this country, after viewing that horrible movie on ABC, what would these little gnats have to do in relationship with the big buzzards that Moscow is sending from their nests? I don't understand. Thank you.

Colonel Casari: Thank you, Mrs Shotz. Mr Gene McCann.

Mr Gene McCann: Thank you Colonel, ladies and gentlemen. It has already been somewhat explained why we, from Dixie Valley, a small contingent are visiting your area tonight. I think that's pretty obvious now that we do have a common problem.

In regard to the sonic booms and their effect on human psyche, I was in the Air Force also during World War II. I served a hitch overseas in a B-24 bomber crew. I can remember delivering many loads of bombs; I saw the devastation, the destruction of bombs. I also was on the receiving end a few times where I was caught above ground, not able to reach a bomb shelter during German bomber attacks on my area. I was stationed up on the Wash in England with the 93rd Bomb Group and I remember very well the traumatic effect of bombs exploding quite some distance away from where I happened to be. You didn't have to have shrapnel flying around to wet your pants. I don't like to be too melodramatic about this, but I do want to tell you I relate sonic booms to many of these bomb blasts that I experienced myself.

The Air Force, in its summary of what it's proposing, seems to play down tremendously the effect of sonic booms. Over there in Dixie Valley, I wonder if they're using a different kind of sonic booms. It makes me shudder when I hear one occasionally. This is just one every so often, not 25 or 30 a day. When the Air Force - if the Air Force gets it proposal through and this area is subjected to this 1,050 sorties in a month's time, you can bet on it. You will have many sonic booms and they are not going to be this little thing that doesn't disturb anybody. I consider myself just an average person but I can -- I shake a little bit when I hear these things. I think I've talked enough on sonic booms but I would like to touch on something concerning the Constitution.

Colonel Casari: Two minutes.

Mr McCann: You may or may not realize that the Constitution is a limiting document which must have been God sent by the founders, the writers of our Constitution; however, it mainly keeps the government off our backs - the government in any form. It is up to us to watch what is going on, study that Constitution. Many of us haven't read the Constitution since school days. Well, I think that's tragic. There could be a tremendous loss to the country if too many people do not know what their protection is under the Constitution. Thank you very much.

Colonel Casari: Thank you very much, sir. Mr Ray Blackford. And permit me also to apologize to the previous speaker for the distraction which occurred which I was unfortunately unable to prevent. For the record, the one microphone slipped from the stand. Please proceed sir.

Mr Ray Blackford: I'm Ray Blackford. I also am from Dixie Valley. These coats - Dixie Free Militia on it. The reason we are wearing these coats is, we as individuals, had no voice in fighting the Navy. We had to band together and so we chose this name, Dixie Free Militia, as a group to oppose the Navy from destroying our valley. That's why we have them.

A while back, my wife and I came to the valley to retire there. We love Dixie Valley. It's a beautiful place. It's quiet. We have artesian wells. I was managing for awhile a beefalo ranch. The Navy came in and started a proposal of the supersonic area. Since then I have seen the cattle wildly stampeding in the corral; we have seen goats drop kids prematurely shortly after sonic booms. As Ed mentioned, after the testing, it was upsetting to the community. We feel that we are literally in a war zone. The worst part of it is, it hasn't even started yet. These are merely the violations; these are the things that the Navy has done to us before they have started their supersonic operations and I'm begging you please write to your Congressman, to your Representatives. Stay behind your people that represent you. Keep in contact with 'em because this is the only way that you can fight them. Take the Air Force to the courts. Tie them up in the courts. That's what we're doing. So either take it in the courts or through your elected officials. I believe this is the way that you're going to win. Thank you.

Colonel Casari: Thank you, Mr Blackford. Mr Bruce Polk.

Mr Bruce Polk: As you can see, I'm also a refugee from Dixie Valley. During the break tonight I was standing back there and I heard somebody say something about, those guys from Dixie Valley. What are they doing here? They're in enough trouble already. And as you heard tonight, why we do have some problems out there, thanks to the Navy.

We moved to Dixie Valley a few years ago and we were still working in California and trying to move back to Nevada after being gone for fifteen years and selling real estate in California and trying to bring Californians over to Nevada to get out of that mess over there, and we had about four parcels of land in Dixie Valley that we thought that we would sell, as an added income. Besides we have our own little farm there. And I believe it was about the end of about 1980, I put an ad in the newspaper in some small papers around northern California and I immediately sold a 10-acre parcel for $12,000. This was in 1980. And as Mr Blackford just told you, we have a beautiful valley there. I mean it's 3500 feet elevation, ideal growing area, artesian water. We have two tremendous wells on our property. We just turn on a spigot and there's the water. We have fruit trees. This is not a commercial trying to sell you property. I'm just trying to tell you how desirable this area is.

Again in about 1981, we decided well, we would sell another parcel, so I ran some more ads in some little throw-away papers

around northern California. The first call I got was from Napa, California. An individual called and they said, where is this? You say northeast of Fallon, Nevada, a place called Dixie Valley. He said, oh, I heard about that. Somebody told me that the Navy's there taking everybody's land away from 'em. Now that was just rumor, of course. Now that's the way real estate values go. After that I heard comments such as, oh yeah, you're in the valley there where the Navy's bombing you, or you're in a place there where the sonic booms are wiping out your homes. Yeah, we don't want any part of that.

About three months ago, some people from southern California - I got them through an ad - an old ad that they happened to pick up, and they called and they said, well, we want to come up and look at Dixie Valley. So they came up and they looked and they really liked the ten-acre parcel that I had there, but being a truthful person as I like to be, and I said, there's one thing I've got to tell you. I've got to tell you about the problems we have with the Navy. And then I went on to tell him that we are on the edge of this SOA area and what could happen and what is proposed to happen. He says, yeah, now you talk about it, now I remember something about that. He says, you know, frankly we like it here but we're down in an area where we've been pushed around by the military for years in southern California and we just really don't want anything more to do about it.

Colonel Casari: Two minutes.

Mr Polk: So, all I have to say is, if you think that your property will not be impacted economically, or your real estate values will not be hurt, when Nevada has been one of the fastest growing states in the union per capita last year, and it's kind of a state where people want to get away and do their own thing, why just think twice before you allow this to come into your area.

Colonel Casari: Thank you Mr Polk. Mr Jack Fulton.

Mr Jack Fulton: My name is Jack Fulton and I represent myself as a private individual. But first of all, I'd like to also be recognized as a military pilot and I fly for the Individual Ready Reserve, and I'm a senior aviator in the Army. And I'd like to support the Air Force in the fact that I understand the needs for the training areas - the needs to train our pilots. Our Air Force isn't out there to harass us or they're not specifically designed to run us off the road or give us sonic booms or make life miserable for us, but those pilots are out there to train. And I will admit that there are some irresponsible pilots that do break the rules a little bit, but I am supportive of the Air Force efforts to get more airspace.

Now let me turn my card over because I live here and I don't think that this is the airspace they really need. There's some inconsistencies that I'd like to point out that we see right here. I have a publication here that's a news release from 9th of November and it shows here that the - on mine, that the actual restricted area is inside of the MOA and it was my understanding earlier that what they were going to say about the supersonic area

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was, all we wanted to do was have the MOA - have permission to fly faster in the MOA, but this publication shows proposed restricted area configuration which splits that MOA and gives us half restricted area and half MOA. What this means to me, as a pilot out there, is that I'm still faced with the fact that I'm going to be dealing with supersonic aircraft in the MOA, as well as underneath the MOA, at the 5,000 foot buffer, which also there are publications out that say that this restricted area will go down to 100 foot AGL, inside this restricted area. So I see some inconsistencies in what we're gettin' here in publications and what we're being demonstrated here.

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Also, I would like to remind the folks what happened out here three years ago with the - what were there, three military pilots - within less than a mile from here, we still have a big charred mark on the ground and a crater out there from the impact of the F-4 and the two lads that were killed out there. So that's irresponsibility on some of our military pilots which doesn't look very well when the Air Force comes up here and presents us with this situation.

As far as access to the restricted area as it stands right now, I've made the trip from Ely to Salt Lake perhaps sixty times in the last three years, and I've only had one time permission to go direct route through Clover Control, and a direct route from Ely to Salt Lake, so all other times, as an air-taxi pilot and commercial pilot flying VFR, I've had to go to Wendover or to

Delta and around, adding time to my leg and also expense to my customers.

Colonel Casari: Two minutes.

Mr Fulton: I also want to point out the size of the area that's proposed. It's about 30 by 90 miles in change of this aspect, and to put this into timewise at Mach 1, it's about seven minutes of flight time and at Mach 2.5, it's about three minutes of flight time. So if the three minutes of flight time for that pilot is valuable training, where's the tradeoff as far as the inconvenience for the hundreds of people and the additional three minutes of training for that particular pilot at those speeds? That's all I have sir.

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Colonel Casari: Thank you very much. Thank you Mr Fulton. I believe it's Mr A. Z., I hope I have the middle initial correct, Joy.

Mr A. Z. Joy: How can you forget a complicated name like that? (Laughter from the audience.)

I'd like to read a resolution that the Nevada Cattlemen's Association, Nevada Woolgrowers adopted at the joint convention here at Ely on November 16th.

Whereas the US Air Force has declared the need of a supersonic test and training range within useful flight time and distance

from Hill Air Force Base, Utah and whereas the proposed action will withdraw and restrict that airspace adjacent to the already extensive, existing military operation area in northwestern Utah, and will also extend into eastern portion of Elko and White Pine Counties of Nevada, and whereas supersonic booms are known to cause physical damage to property and serious health hazards to people and their livestock, and whereas the closure will restrict all other aviation used within the proposed area in a state already extensively burdened by restricted areas;

Therefore, be it resolved the Nevada Cattlemen's Association opposes this proposed action by the Air Force and the FAA, and urge their consideration of other alternatives.

I'd like to say one thing, You people gave us the DEIS to read. I refer you to the August issue of the Reader's Digest.

Colonel Casari: Thank you, Mr Joy. Mr Russ McOmber.

Mr Russ McOmber: Thank you Colonel. I'll be very, very brief. I think when I looked at the things on the charts up here, and I don't really understand these, but I do understand the one thing that says "people," and I represent youngsters as Superintendent of the Schools, and presently we're under fire throughout the nation. We're becoming a political issue for the first time, which is probably the most positive thing that's happened to education. People are concerned about what's happening to their most important resource, which is their children.

We just had a recent report called, "Nation at Risk," which tells us very explicitly that our young people are important to us. My concern, and the concern of every educator probably in this state or any other state, is disruption - I'm sorry, annoyance. If a youngster becomes an annoyance in the classroom, we remove him. It's pretty hard to remove a jet airplane and those annoyances, however slight, are disruptive to the educational process. And I can't see how we can possibly continue in any way educating our youngster when we're, pardon the expression, constantly annoyed. Thank you very much Colonel. 174 174

Colonel Casari: Thank you Mr McOmber. Is Mr Bob Marcum here? Mr Marcum will read a statement of Mr Al Stone, and as he is very next on the list - I believe I have this order correct - he will then address you in his own behalf. Thank you sir.

Mr Bob Marcum reading for Mr Al Stone: This statement's on the behalf of the Nevada Wildlife Federation, Al Stone was scheduled to give it to you this evening. He's a director in that organization. Now he's out in the back country someplace. In any case, this is signed by the President of the Nevada Wildlife Federation, Andy Leach.

After careful review of the Gandy Range Extension DEIS, the Nevada Wildlife Federation is strongly opposed to the proposal. We would be in favor of alternatives B, C, or D as 4 4

addressed on page 11 of the DEIS. On page 4, that's IV, the DEIS states, "Environmental impacts are considered minimally in all respects except the noise resulting from sonic boom activity." At the rate of 100 to 125 sonic booms per day, the Federation feels that this is a significant impact on the environment. 4 Cont. 4 Cont.

The DEIS states on page 5 that questions on long-term protracted exposure and sublevel responses (of wildlife) remain to be studied. On page 46 of the DEIS we read, "One study indicated that the Sooty Tern reproduction rates were severely reduced when the eggs were exposed to intense sonic booms." The Federation wishes to point out that the proposed area is some of our finest deer winter range. What will the sonic booms do to the rut and what effect will the stress of the booms have on the pregnant does? Will this stress result in a higher fawn mortality? The DEIS states on page 46, "The most delicate and sensitive behavior of animals is that associated with the biological reproduction." 37, 147 37, 147

Also of importance to us is the fact that the valleys of the proposed areas are among Nevada's finest trophy antelope habitat. Will the booms interfere with antelope reproduction or will the booms make them more vulnerable to hunters? 37 37

Quoting from the DEIS, page 59, "Recreational activities now taking place in the land area beneath the proposed supersonic flight airspace are of outdoor wilderness experience nature." Activities include hunting, hiking, camping, etc. These are

activities where the values of unspoiled nature are deliberately sought. Because of the remoteness of the area, the total number of people participating in these activities is expected to be small.

The Federation wishes to point out that in our arid and harsh state, areas of this nature are scarce. Our population's growing rapidly, perhaps more rapidly - most rapidly in the nation and recreational demands on this area will increase significantly.

4 The White Pine Power Project DEIS of October '83 cites the preferred location of the generating plant in North Stepto Valley. This site is less than 50 miles from the proposed operations area. The White Pine Power Project DEIS states on page 10, and that's X, "At the peak of construction, the total population of White Pine County will be nearly 50 percent more than its projected level within - without White Pine Power Project. The increased population will place an increased demand on outdoor recreation. 8

37 The Federation wishes to discuss one final point, that being raptors. According to the BLM Draft Wells Resource Management Plan and EIS of major significance in the Gosiute WSA, that's Wilderness Study Area, 5,000 to 6,000 raptors, including gose hawks and golden and bald eagles, have been observed migrating south each fall. This does not include the resident raptors. What will be the effect of the supersonic booms on these raptors? Will the booms alter their forage supply? Will the booms disturb nesting and reproduction? That is the statement from the Nevada Wildlife Federation. 37

Colonel Casari: Thank you sir. You may proceed with your statement, if you choose.

Mr Bob Marcum: I'm not actually representing myself. I'm the President of the New White Pine Sportsman's Club and the Club would like to read into the record a comment.

The New White Pine Sportsman's Club is a White Pine County organization with 55 members in Ely and McGill, Nevada. We have carefully reviewed the DEIS for the establishment of the Gandy Range Extension. We are strongly opposed to this proposal. We are not opposed to alternatives b, c, or d, as stated on page ii. Our concerns are primarily in two areas of predicted problems. 4 4

First is our strong concern on the potential detrimental effect on all wildlife, including feral horses. Page roman numeral V states that questions on long-term protracted exposure and sublevel responses remain to be studied for wildlife. The Nevada ground areas involved are substantially used for the hunting of mule deer and antelope. Mule deer hunting takes place in the foothills and mountains; antelope hunting takes place on the valley floors. It is our experience that these two big game animal species are extremely difficult to approach after a sonic boom. There is no question that the Gandy Range Extension will have a detrimental effect on big game hunting in the area. The sonic boom effect on small game and nonconsumptive wildlife is also believed to be detrimental. 37 37

The second area of strong concern is the undesirable impact of sonic booms on persons using the Gandy Range Extension area for recreation. Subject land is regularly used in spring, summer, and fall for primitive back-country recreation and sonic booms will impair this experience. While subject US governmental BLM is managed for multiple use, it is our strong position that the proposed Gandy Range Extension would impose an undesirable environmental effect on all species of wildlife and on recreational users of this land. Thank you.

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Colonel Casari: Thank you sir. Mr Joy Bybee.

Mr Joy Bybee: As Chairman of the White Pine Tourism Committee of the Chamber of Commerce, I'd like to just pass on a - that we would like to express our feeling from the Tourism Committee.

The White Pine Chamber of Commerce Tourism Committee would like to express its concerns over the proposed Gandy Range Extension and adjacent restricted airspace of the area for the supersonic flight training.

The Tourism Committee is working to promote tourism in White Pine County and increase the tourist trade. The committee recognizes that our area has great and potential tourist throughout this scenic, beautiful, and historic sites and recreational opportunities. Increased tourist trade can have a substantial and a very positive impact on the area's economy. The proposed extension of the supersonic training site may be very detrimental to

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our efforts in three ways. The increase in military flights over the area decreases the potential for civilian flights through the restricted airspace, making it more difficult for our civilian travelers to come to Ely. One of the county's greatest assets for to increase our outdoor recreational facilities. We have millions of square miles in the back country waiting to be used. The increase in sonic booms will reduce the appeal of these back country to a tourist. The Spring Valley, Mt Wheeler, Mt Moriah and the east side of the county for outdoor recreational use.

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The county attracts hundreds of visitors every year to hunt, fish each year. The negative effect of the increased sonic booms in the areas wildlife are not known and not have been fully explored.

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White Pine County, at the present, suffers a high unemployment and unstable economic conditions. Increased tourist, we believe in this area, is one way to generate jobs, income for our county residents. The extension of the Gandy Range and adjacent restricted airspace for subsonic flights and training will provide - will not provide any direct or indirect economic benefit to our area.

The committee feels the Draft Environmental Impact Statement has not been adequately addressed to the economic impacts of the White Pine County and we are opposed to the extension of a supersonic training site.

Colonel Casari: Thank you Mr Bybee. Mr Scott L. Anderson.

Mr Scott L. Anderson: I'm from a small community just a little east of you here. I'm approximately 20 miles south of this area and I felt that maybe I should say a few things. I think most of them have been adequately covered already.

One of the things I don't feel has been addressed are those people that are living in the area. In the statement that - 272 the Environmental Impact Statement says there's 350 people out there. I wonder who went out there and counted them. We surely didn't see anybody out counting heads. 272

The other problem that I see is that we have three schools in the area that I don't think have even been considered. I didn't read anything about them in the statement. I - as illiterate as I may seem at this time - I am somewhat nervous, I have to admit, but I come from a family that - my mother is a teacher, my sister is a teacher, my mother-in-law is a teacher, and I even married a teacher. Now if that doesn't show up, I think I have a little bit of an idea of the effect of this kind of flying on the kids. And when the kids go over they all think that's neat, but they are not trained. And I am a pilot, okay? And I have - well, I should say we have an airstrip that is in this MOA. We are off the end of it. We regularly have fighter aircraft flying over. I'm afraid that I don't have a good enough - I'm not fast enough to tell whether they're Navy or if they're Air Force airplanes. All I know is they come over and they think the corral is a neat place to buzz.

Well that corral happens to be my livelihood. Now if that doesn't count, I want to know who's going to make that determination.

273 In the EIS, they state that the Air Force will reimburse those claims that they find to be - I'm sorry, I forget, I didn't write it down - anyway they want 'em validated. I'm curious as to who's going to make that determination. They say that it has to be - they'll give you the fair value of the replacement cost of the window. Well, I wonder if they're going to pay that glass man to come out and replace that window. Is he going to pay me for the amount of time that that window is out while I'm waiting to write the letter to the glass man that I need a window replaced and then for him to get the time to come out? All that time, here we've got a piece of wax paper up in the window holdin' the breezes out. 273

Colonel Casari: Two minutes.

175 Mr Anderson: The other thing I'd like to address is - it says there's no impact on aviation in the area. I like to fly in that area. I fly at approximately 100 to 120 miles an hour. Well we have our flyboys coming through there and I suspect that I would lose any race with them. I can look out for myself and I can look out for the fellow that's approaching me if he's in another general aviation airplane. I can't look and make my circle just before I take off and clear the area, and when I take off, by the time I reach the point where I'm a hundred feet in the air, that fella has 175

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come over the hill in back of me and he's on top of me, And his training has ended and so has mine. And I think that these things need to be addressed and I would like to have known about it long enough in advance that I could have had a nice written up thing here and I'd a had my wife read it to you. But I'm sorry, you'll have to put up with me.

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Colonel Casari: I don't think I depart from the neutrality in saying that your literacy is not in doubt.

Mr Gene Heckethorn.

Mr Gene Heckethorn: Well, I haven't got a whole bunch to say except that I do have a son and I do have a brother that's both licensed pilots. They're indirectly right in the middle of this thing out here. I own a little farm right in the south end of this proposed area, in Snake Valley. It's between Baker and this area here. I have observed planes coming over there and if it hadn't been for the 230,000 volt line coming through there, I believe they'd probably been just a little closer to the ground than that. It's approximately 90 feet off the ground.

And I do have livestock in there and I can't help but think this whole thing is uncalled for to have this kind of an area, that many areas in this state. It just doesn't seem feasible atall. That's about all I have to say. Thank you.

Colonel Casari: Thank you Mr Heckethorn. Mrs Barbara Rowley. I'm sorry, I was given a card. I did not note that it indicated negative. I apologize. Mr Art Olson.

Mr Art Olson: Colonel, in order to add a little variety to tonight's festivities, I would begin by expressing appreciation for the opportunity that is ours to participate here tonight.

I'm Art Olson and I'm Chairman of the White Pine County Industrial Park Review Board. It is representing this group that I would make this formal statement.

The White Pine County Industrial Park Review Board has reviewed the Draft Environmental Impact Statement for the proposed Gandy Range Extension and adjacent restricted airspace as an area for supersonic flight training. The board feels that the DEIS does not adequately address the economic impacts the extension could have on White Pine County. Additional analysis on the effects on civilian flights and economic impacts on the county is needed. Airspace to the south east and west of White Pine County is already restricted for military uses. Extension of the range and increasing the volume of military flights will decrease availability of airspace for civilian flights. This reduction of flights for air traffic, both passenger and freight, to fly to White Pine County on an east-west route. 142 142

The Industrial Park Review Board feels the proposed Gandy Range Extension and restricted airspace for supersonic flight has the potential to adversely affect the White Pine County's economic development efforts. Given the information available in the DEIS, the board opposes the proposed extension. I would also say that,

as Chairman of the White Pine Power Project Advisory Committee, that we would reflect these same basic air passenger and freight concerns. Thank you.

Colonel Casari: Thank you Mr Olson. Mr Dale W. Green. The speaker indicated most of the issues had been covered quite adequately and he thanked the group. Thank you sir. Mrs Laura Dean.

Mrs Laura Dean: Well, I think that we have definitely covered all the things against this whole issue, so I would like to point out something that is definitely a benefit to us all.

Now, I have this German Shepherd. He's about 14 months old and his ears never did stand up but everytime there's a sonic boom the sucker puts his ears up, so I figure I'm gonna have me a perfect German Shepherd if we have enough sonic booms. Now that's one. Now I have another one, and that is the Lehman Caves. Now, if you want to take a tour, it used to be so long. They used to have those beautiful caverns and things, you know. Now, they've cut some of those things out. You know, it makes me wonder. They tell me that there's a crack that's gotten wider and, you know, they don't really tell us why. So I figure that must be it. Sonic booms, and now we don't have to go so far and walk so far. Right?

Now, there's another one. Oh, I love this one. I have this friend - oh, by the way, in case nobody wants to identify me, I live in Baker, Nevada and I'm next door neighbor to JoAnne Garrett,

and she has a daughter here and she's real pretty. Now I saw this pilot the other day and he was so cute. He came about 50 feet above my place and he had blue eyes and the only thing he didn't do was give me his name. He needed a shave slightly and I could tell and I thought I'd introduce him to Diane Bullock. So there have to be some advantages to all this, don't you think?

Now the other thing is, who's gonna pay my insurance rates for all this bullshit?

Colonel Casari: Thank you Mrs Dean. We have gone something - slightly over an hour and I'd like to afford you another five minutes rest.

(Hearing adjourned at 2123 and reconvened at 2135.)

Colonel Casari: May we reconvene the hearing please? Please come to order. Mr J. Mike Townsend.

Mr J. Mike Townsend: I'm not gonna plow a whole lot of new ground. I'm a local resident. I'm a general aviation pilot. I own a small communications business in town and I think most of you know I'm the engineer for the local cable television company. I'm interested in this issue from all three points of view.

My experience indicates that I am very unconvinced that there'll be no adverse affect on Sky West operations by this proposal by the Air Force. I believe, at the very least, Sky West'll

experience increased fuel costs in transit times, and I think they're gonna come out of our pockets. We are very dependent on Sky West for the transportation of our own personnel and people coming to visit us and emergency parts. We are not a big company; we don't have thousands of dollars of spares sittin' on the shelf, and in the wintertime especially, Sky West has had a very good record of making their flights with a minimum number of overflights and missed landings in adverse weather. And one of the reasons is their flexibility of operation in the - with the type aircraft they're flying and lots of airspace. And I think this would - particularly in the wintertime, they're gonna have more problems with this high level of jet activity close by. I believe that it will result in an increased number of aborted landings and flights in and out of Ely, particularly during times of adverse weather. I think that will have an adverse affect on the business economy in Ely in general, and certainly we don't need anymore of that. 142 142

If this proposal was to go through, I see a need for a very large-scale upgrading of the electronic gages and navigation in the area. I see the needs for instrument landing system, MLS in the airport, and who's gonna bear the costs of those to maintain service. We've got a rather marginal situation from the pilot's point of view out here. Awful lot of that cumulus granite to find when you're flying in bad weather and there's nothing more valuable than lots of clear airspace around you, and this proposal proposes to take away a lot of that. 142 142

It was mentioned earlier that they didn't want to go over Dugway because of all the delicate equipment and I would point out that most of you are probably aware that several of our mountaintops in the immediate area, the operational area, have got delicate equipment which brings us our television, our communications, and various other electronic aids to bring the 20th century out here into the backwoods. And the equipment - I work on a good deal of it and it's subject to continual mechanical assaults. We've been on some of the mountaintops with very close encounters with military aircraft that are outside this MOA as it exists now, and the shaking and pounding that the sites take result in increased maintenance costs and increased unavailability of the equipment.

From the general aviation point of view, there are conflicts between general aviation aircraft and military aircraft, in general.

Colonel Casari: Two minutes.

Mr Townsend: In the last five years, as a passenger in a commercial airliner and as a pilot in a general aviation aircraft, I have had two near midair collisions with military aircraft more than fifteen miles outside the boundaries of their operating areas. In both cases, I feel that midair collision was averted only by the sharp eye of a FAA radar controller. In both cases, we had no visual contact with the aircraft until we had taken severe evasive action. In one case, we passed within a thousand feet of a Navy jet fighter, 25 miles outside of his operational area, Fallon.

Military aircraft have navigational failures, they have pilot failures, they have pilot error. We don't need that this close to this area. I believe there are viable alternatives.

And as for sonic booms, we get 'em in town every once in a while and I came back in that patch of Southeast Asia we shed so much blood over a few years ago, and when caught unawares, I still end up hanging from the rafters. And we don't have very many in town, but I think we'll have a whole lot more and I think this proposal is poorly founded and not terribly well addressed by the Air Force. I believe there's a whole lot of looking that needs to be done. 274 274

Colonel Casari: Thank you Mr Townsend. Mr Philip J. Carter.

Mr Philip J. Carter: I'm Philip J. Carter; I live in Lund; I'm involved in agribusiness. And many of my conerns have been very well addressed here this evening, so I'm gonna be very brief.

I would like to protest the extension of the Gandy Test Range further into White Pine County for the following reasons: It could make a more circuitous route for our commercial airlines between Ely and Salt Lake City and may have detrimental effect on air transportation in and out of White Pine County. Now the Air Force addressed this tonight, but I'm still concerned in their moving the supersonic test area closer to our airline in and out of here. 102,142 102, 142

Also, extending the range would have a detrimental impact on many years of prior ranching or travel in and out of Spring Valley and other valleys affected. And I don't think that this thing has been very properly addressed here tonight yet. 142

I also feel that the extension of the range and the resulting added sonic booms would have an impact on the people, livestock and buildings in the proposed enlarged area. I would urge that the Air Force consider alternatives to the enlargement of the test range and I thank the Air Force for this opportunity to express my comment here tonight. 98

Colonel Casari: Thank you Mr Carter. Mr John Polish.

Mr John Polish: I'm John Polish, former Assemblyman of White Pine County. Right now my concern is we own about 372 acres just south of that little airstrip the Air Force is talking about there and we - my son and I - of course, are against this particular proposal of using this by the Air Force and, our main question though is, with the speeds that our aircraft are traveling today, we don't hear very much about it except at some of the islands where some of the atomic bombs were, but why can't you just - the extra five or ten minutes that your planes could fly - do a lot of this over the Pacific Ocean? My question is, why haven't you used more water bodies? Is it to save your pilots or - I don't think that they're - according to a lot of the crashes that we've had, you can't - whether it's on water or land, it's pretty disastrous. But we are opposed to this particular Air Force program. And that's my comments tonight. 275

Colonel Casari: Thank you Mr Polish. Mr Otis D. Johnston. Do you wish to address the group sir?

Mr Otis D. Johnston: Yes. I'm Otis Johnston, the Civil Defense and Emergency Management Director for White Pine County.

One of the things that has not been, I don't think, addressed in any of this, is the additional exposure to possible accidents in the eastern part of White Pine County. Now if we get a plane down, we're going to have to activate our search and rescue people and all this sort of thing. Who's going to pay for it? It's costing you and me as the taxpayers of this county to do this. So this is just one of the things that I don't think has been addressed. It is a possibility and as we get more and more planes into the 22 miles - into the 22-mile area that this will extend, from the Utah border into White Pine County, then we're going to have more exposure to this type of accidents. Thank you. 276 276

Colonel Casari: Thank you sir. Mr Reed Robison.

Mr Reed Robison: I'm Reed Robison. I live in Spring Valley. I feel that my sentiments have been adequately expressed here tonight but contrary to what you might have read or heard, I have no written agreement with the Air Force concerning my access to their proposed range extension. Thank you.

Colonel Casari: Thank you Mr Robison. Mr Ken Heinbah, do you wish to speak to the group? Apparently Mr Heinbah has departed. Mrs Elaine Pollock.

Mrs Elaine Pollock: Something I would like to know is - our drill rigs have 50-foot booms on 'em and we have drilled around in the proposed area. Will this affect us on our drilling as far as our equipment moving around and the boom being up on the hills and things with these jets going through? I also wanted to know if the land restrictions will be changed on the leases for the land for the mining. I also wanted to know if there's any definite statistics on how far we can hear a sonic boom from where it starts. At 5,000 feet elevation, 10,000 feet? I know that during last week we heard a sonic boom right here in Ely and our guests were saying what on earth was that? The windows shook. And I said, well it's a sonic boom. It happens every so often. But that was two valleys away. So what will we hear when it's right next to us just one valley away?

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I think the Army will also find that a harried mother finally gets her baby or youngster down for a nap and all of a sudden a sonic boom hits, we're going to have World War III right here. And I think we'd all feel the same way. There's days when all of us, no matter what age we are, come home, sit down, kick our shoes off, lean back and relax a minute. Well when we know that three or so times a day we can expect a sonic boom, it's really going to be hard to shut that out when we're trying to relax, we're going to be thinking, is it going to hit. And the kids are gonna feel it, we're gonna feel it. The little kids who

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are under five right now will slowly get used to it but they don't know yet the results of what's gonna happen to 'em when they hit school. I mean, they're gonna be just like we are. They're gonna say, when is it gonna hit. You know, they're gonna be sleeping and think during the naps or whenever, and they're gonna be thinking, is it coming. Every little noise they're gonna wonder if they're gonna jump with it.

In conclusion, I'd like to say we love and value our peacefulness here and sonic booms aren't conductive to that peace. Thank you.

Colonel Casari: Thank you Mrs Pollock. The last listed speaker is Dr Richard Bargen. Dr Bargen indicates he has a great deal of scientific evidence that he wishes to put on the record, and it may be that the time limit would not permit it all. I have agreed to extend him ten minutes. I will give him warning at eight. If thereafter - we will then conclude the meeting. If thereafter, Dr Bargen wishes, he may record the remainder of his remarks on the tape recorder. Doctor.

Dr Richard Bargen: Thank you. I didn't want to sound too vicious here. First, I have some questions. The question period was rather short and if the Air Force people - if anyone would feel qualified, I - first of all I would like to ask, for the restricted areas now that are presently extant, restricted areas

6, 7 - I think it's 07, for instance, where are the vertical boundaries for that restricted area? And that's referring to this area here (indicating on the map).

Colonel Casari: Do you wish an answer to the question now? And are we able to respond to that?

Dr Bargen: I was wondering about the vertical boundaries for restricted areas currently extant 6407 or 6707, I can't quite see it. Where are the vertical boundaries? In other words, based on ground to certain altitude or does it have 5,000 feet to a certain altitude?

Larry Davis: Yeah, the vertical boundaries on 6407 go from surface up to 58,000 feet.

Dr Bargen: Thank you.

Colonel Casari: That was Mr Larry Davis.

Dr Bargen: Now for - I'd also like to ask, what are the rules that the Air Force or the military uses, or the FAA uses, to establish the boundaries for restricted areas, for instance? In other words, is it the handbook for airspace - handling airspace matters? Is that the book that is used to establish these boundaries?

Larry Davis: I'm not sure what the - what book it would be. Normally, when you establish boundaries, it's - you're talking about how much airspace you really need and to what altitude, and those are the requests that will go into some proposal like this. And so I'm not aware of any book you go to. It's just a need that the Air Force has to have, you know, for the proposal.

Colonel Casari: Larry Davis, again.

Dr Bargen: Thank you. Then I'd like to go to the book that the Air Force needs to follow. It's called, "Procedures for Handling Airspace Matters," and it's DOT FAA 74002B. Now for the present restricted areas such as 6407, from ground surface, or from the surface to 58,000 feet, the requirements to meet these requirements, to have a restricted area at ground level, there are certain requirements.

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First of all, under Section 694, restricted area floors, if practical, shall be designated at 1200 feet above ground level, or higher. If this isn't practical, then the following criteria shall apply. Amongst these criteria are that the - if private or public use land underlies an area, the restricted area floor shall - the word shall has a specific meaning in this document - shall be designated or agreements made by the using agency so as to provide aerial access to the land. Secondly, the surface may be designated as a floor only when the using agency, in this case the Air Force,

either owns, leases, or otherwise controls the underlying surface and the criteria listed previously, are applicable. Now, I'd like to ask, does the Air Force have lease agreements or any written agreements with private landholders under the restricted area 6407?

Colonel Casari: These questions will be responded to subsequently. I believe we have too little time this evening. Please proceed sir.

280 Cont.

280 Cont.

Dr Bargen: Okay. The Air Force doesn't have any agreements with these people. By definition, by their own documents, the existing restricted areas are illegal. It's just a point I'd like to make amongst many, potentially hundreds of points.

The present restricted areas, the boundary definitions are illegal. There are several other restricted areas in the same category.

I'll repeat a statement I made at Ibapah. I've been authorized by the Executive Director of the Nevada State Medical Association to make the following statement: Nevada State Medical Association officially opposes the concept of supersonic, low-altitude flight, both in general and also in this proposal specifically. This opposition is due to a known and postulated hazards to the health and welfare of human beings of these proposed actions.

The Draft Environmental Impact Statement that many people - that we're basing our comments on, is a very flawed document. I

reviewed all their literature that's both listed in the bibliography in this document; I reviewed several hundred other studies, personally reviewed them for their pertinence and for the accuracy as compared to what might be stated in the Draft Environmental Impact Statement.

As many of you know, the first Draft Environmental Impact Statement for supersonic operating area came out for Morency and Valentine, Texas in 1979 which was the gap - there was a gap from 1978 to 1980, shown to you on the previous slides by the Air Force. That first document was flawed to the extent that a revised draft was required. This revised draft forms the basis for this document. The - to sum up a lot of information, none of the information in this document, none of the overpressures, --

Colonel Casari: Two minutes.

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Dr Bargen: -- none of the postulated effects from these overpressures, are based on one single measurement. The way the reasoning goes, is this. Twenty-one flights - twenty-one flights of the F-15 aircraft were flown in the Oceania Military Operating Area of the eastern seaboard. From these 21 flights and the air combat maneuvering instrumentation system, data was gathered which was plugged into an equation, designated Carlson's Simplified Method. From Carlson's Simplified Method, which is restricted to straight and level flight, certain overpressures were calculated. -

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These overpressures, I must stress again, were calculated based on a simplified method that's applicable only to straight and level flight. William Galloway, an Air Force researcher - I'm not sure if he's Air Force personnel, but he's done many studies for the Air Force - has specifically stated in his Bolt, Beranek, Newman document of September 1982, that this bears no relationship to the type of overpressures, the type of activities, the type of noise that will occur in an air combat maneuvering area. For instance, the document states that this area will allow the pilots to perform and explore the full performance envelope of their aircraft. The pilots in the audience will know that you do not explore this - your performance envelope of a Mach 2 or plus aircraft, flying at Mach 1.1.

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Colonel Casari: Sir, your time is concluded. Please sum up.

Dr Bargen: Okay. I think, in summary, and it seems pretty obvious, what we're dealing with, is that the Department of Defense, for very necessary reasons, has discovered the need to fly supersonically over certain areas for certain types of training. From a medical point of view, from a human point of view, from an ethical point of view, from a moral point of view, this cannot be done over human beings. It has to be done over uninhabited areas. What the federal government and the Department of Defense has

initiated is a major federal action which requires addressing, by what NEPA calls programatic or generic EIS. In other words, the concept of supersonic flight over human beings has to be addressed, not specifically for Gandy, not specifically for Morency, not specifically for Valentine, or for Fallon. It has to be addressed in a general environmental impact statement as a major federal action in itself. However, the process that you're involved with now is merely cosmetic and your only input is through your political people and through the courts. And the only real input to my mind will be legal action.

And finally, I'd like to restate, this action is subject to the court case currently in Reno as a - under preliminary injunction to prevent the military from flying supersonically over inhabited regions. If the court case should happen to be won, or the injunction granted, then this proposal will be moot, but the question still remains that it's being approached in the wrong way and the military must address this question far more seriously if they expect the common people living in this land not to rise up and oppose them in these necessary actions.

Colonel Casari: Thank you, Dr Bargen. I see a hand from the back.

Mike Townsend: Colonel, one brief question. I should have read my notes more carefully. Can you hear me all right?

Colonel Casari: I can hear you sir, but it's a problem of recordation. Will you please come to the front?

Mr Townsend: One point I omitted in my presentation is that we are dependent upon Life Flight for high-level medical care. We have very fine local medical facility yet my wife is alive today because Life Flight got her to Salt Lake to the University Medical Center in time. One of the previous pilots in the area has pointed out the problems of getting clearances to cross the already existent restricted areas. There have been similar problems with the areas at Nellis, even when a medical emergency existed. Will the Air Force provide for absolute clearance, regardless of what's going on on the range for the Life Flight aircraft, direct Salt Lake, direct Ely, and return, regardless of what kind of upset it does to the range operations at any particular time? Our lives are literally on the line in that respect. Thank you.

Colonel Casari: Thank you Mr Townsend. As the question was asked, we'll take the time to hear the answer. Apparently there is one.

LtColonel Joseph Winsett: I want to assure everybody here that we will make sure, through the FAA and through our facilities at Hill Air Force Base, that any emergency of the nature that was described by the gentleman, will be accepted and approved. Emergency flights of that nature take priority over any of our air operations.

Colonel Casari: Thank you Colonel Winsett. Ladies and gentlemen, we have now heard from all the speakers who have signed to speak and I wish to express my appreciation to Congresswoman Vucanovich and to the other elected officials who appeared, and to all of you ladies and gentlemen for your courtesy in seeking to observe the times. We now conclude at 2159 by my watch. Thank you very much. Goodnight.

(Hearing closed at 2159, 30 November 1983.)

STATEMENT BY COLONEL CASARI

It is now 2203 hours and I have informally opened the record in order to record that the offer which was made on the record to Dr Bargen was again made at the conclusion of the meeting; that is, to permit him to dictate the remainder of his remarks into the tape recorder. Dr Bargen, I am advised, by Mr Murdock, declined that offer. He stated that his comments were for public consumption and chose not to exercise the prerogative which we extended him of recording his remarks on this recorder. He also indicated that his main points were included in his previously submitted written comments.

END OF RECORD

PUBLIC HEARING

Elko Convention Center

Elko, Nevada

IN RE THE MATTER OF:)
)
SUPERSONIC FLIGHT TRAINING)
PROPOSAL)
)
)
)

HEARING OFFICER: COLONEL GUIDO CASARI

BRIEFING OFFICER: LIEUTENANT COLONEL JOSEPH WINSETT

Taken Thursday, December 1, 1983

7:10 P.M.

R & S REPORTERS
OFFICIAL AND GENERAL COURT REPORTERS
ELKO COUNTY COURTHOUSE — ELKO, NEVADA 89801
BUS. (702) 738-3810 RES. (702) 738-3640

THE HEARING OFFICER: This hearing will come to order. Good evening, ladies and gentlemen. I can't help but begin the meeting by saying that we are very fortunate, as we were in Ely, to meet in such excellent facilities. I would like to welcome you all to the third of three scheduled public meetings-- that is, hearings, on the Draft Environmental Impact on the proposed establishment of the Gandy Range Extension and adjacent to the restricted air space of the Supersonic Flight Training Proposal. Thereafter-- or hearafter, I will refer to this matter as the Supersonic Flight Training Proposal for Pilots. My name is Colonel Guido Casari, trial judge stationed at Travis Air Force Base, California. My role here is simply to conduct this hearing, essentially, to maintain a fair and orderly procedure and assure that time limits are followed as closely as reasonably possible. I have not been involved in the development of the Supersonic Flight Training Proposal or Draft Environmental Impact Statement. On that statement, I will not be making any recommendations or decisions concerning that proposal.

Now, first on the agenda this evening is an explanation of the Supersonic Flight Training Proposal and Draft Statement. Lieutenant Colonel Joseph Winsett will introduce the briefing and two other briefers, Mr. Larry Davis and Mr. Keith Davis. Following these presentations, statements

and comments from government officials will be received. The order of speakers will be elected officials, first, followed by official representatives of federal statement and local agencies. If any wish to address us, statements and comments or questions from the public will then be accepted. All speakers are asked to limit their comments and statements or questions to five minutes so as to permit as many people as possible, those who wish to speak, to do so within the projected two hours of hearing that we have. So, I intend to be somewhat more flexible, at the outside comments, at least limit your remarks to 10 minutes. We'll start with a goal of five. I'll give a little warning when a speaker has two minutes remaining on the 10 minutes underneath that. I won't interrupt you. I'll try to give you a warning at the least intrusion on your comments by speaking quietly into the mike, two minutes.

Now, to give equal opportunity or for all attendees to speak, those wishing to speak, there is a card at the rear of the room, as you enter you may fill out a card now, if you wish to do so. Speakers will be recognized from the floor only if time permits, and after all those registering or filling out of the card have had an opportunity to do so, if time does not permit the chance to speak tonight, which seems unlikely, you may (inaudible) presenting some such documents to me or to Mr. Reed Murdock, who is to my immediate

right, or mail them to Headquarters AFLC/DEPV Wright-Patterson Air Force Base, Ohio, 45433.

Now, in the event that anyone needs that address and has not picked it up, we'll be pleased to write it individually. You'll have until the 16th of December, 1983 to get your written comments in. That date also marks the closing of the public comment on the Draft Environmental Impact Statement.

Now, we have a Court Reporter present this evening, and verbatim transcript will be available, and we also have a tape system in place as a backup in order to ensure that for the backup purposes any statements made or recorded will be essential for you to speak directly into the microphone. The same microphone will be used by the briefers, and it is situated in the center of the room here in front.

Now, any question asked or any comment or statement made during this hearing will be formally considered and addressed in a final Environmental Impact Statement. Even if your questions or observations cannot be or are not responded to here this evening, you may rest assured they will be addressed.

I'm sorry for the interruptions. I'm privileged to notice the presence at this time, Congresswoman Barbara Vucanovich and Representatives of the Congressional Delegation of the States of Nevada and Utah. Many have traveled

here from Washington, some by way of Ibapah and Ely to be present at this meeting. I'm also privileged to note the presence here of Senator Norman Glaser of the State of Nevada, of Assemblyman Bill Bilyeu, and Roy F. Smith, Elko County Commissioner. We welcome all these elected officials and all of you to this meeting.

I think without further adieu, we can now proceed to the presentation, and I ask Colonel Winsett to proceed.

LIEUTENANT COLONEL WINSETT: Thank you, Colonel Casari. Mrs. Vucanovich and other elected officials, ladies and gentlemen, and Congressional Delegates, we are pleased to be here tonight to be talking with you on this proposal concerning the supersonic training on the Utah Tested Training Range. Our briefers tonight are two people, Mr. Larry Davis, who is Chief of Tactical Operations for the Utah Tested Training Range, will outline the proposal. He will be followed by Mr. Keith Davis, who is an Environmental Engineer. We are all from Hill Air Force Base, both Mr. Davises are employees of the United States Air Force. We will attempt to try and clarify or answer any questions that you have. Please understand, also, that some of your questions will not permit us to answer them tonight because of the technical level or length of the answer to your question, but if at all possible, we'll try to answer some of your questions to clarify issues concerning this proposal.

So, at this time, I would like to introduce Mr. Larry Davis.

LARRY DAVIS: Thank you. Before I start, I would like to go through the color coding that we have on our map up here and just kind of orient you just where everything is located.

Over on the right-hand side we have Ogden, here, Hill Air Force, here, Salt Lake, Tooele, Delta, Utah, Ely, Nevada, Ibapah, Utah, Wendover, and Elko. The area that we see marked in red, going around the parameter of north and south, this area here, and down there, the corridor, this is what we call a Military Operating Area or MOA. What this means is that military aircraft can operate in this area in conjunction with general aviation. In other words, it's C and B, C environment they operate under VFR control. The area that you see outlined in blue up on the north range, down along the south range, this area here and up in here, this is what we call a Restricted Area. This means no one can operate in that area, either military or civilian aviation, unless prior permission is received from the radar unit located at Hill Air Force Base located over here. Of the area that you see marked in black, the cross hash, those are current supersonic areas that we now utilize. The area that you see marked in yellow is the area that we would like to redesignate as supersonic air space. I would like to

emphasize this is already a military operating area, we just want to go faster in the air space that we currently utilize now. Why do we need this additional air space? Back in 1978, we knew that some changes were going to occur in Hill Air Force Base, one transition from the F-4 aircraft to the F-16. Now, the F-4 (inaudible) but it took a great deal of effort and great deal of (inaudible) the F-16 being a much smaller aircraft, it could go supersonic speeds. Consequently, we knew that in order to be able to train in that aircraft in the ranges it would fly, we would need more supersonic air space over here.

Another drafting factor, back in 1978, we knew we would be getting combat air computer instrumentation system at Hill. It's a system strictly designed to teach pilots how to air to air dogfight better in the F-16's located out of this area. The way it works, they sit behind that and they can see everything that is going on in (inaudible) in that information, send the information back to Hill Air Force Base, a person back there can sit in front of the video console and see everything that's going on in that area. What happens, we can now send our pilots out to train in dogfighting, we can send (inaudible) evaluate over to a special building over in Hill while they are training out there. He can see all the mistakes they are making. When they fly back to Hill, they land, all this information

is also in a video tape, and we can go into this building, sit down and replay the video tape and see all the mistakes. It's an outstanding system.

Another question: Why do we need the war down here; why couldn't it be located down in this direction or why couldn't it be up here in the supersonic area; why do we need two different marked ACMI, that's located here? In planning on where to locate that site, we first looked at this area over here. This area is owned by Dougway Proving Ground. They also have some very sensitive laboratories over there. That was the driving factor in pushing it away from that area. We looked at trying to locate another supersonic area up in here, in this direction. The lines that you see going from place to place, these are air ways, IFR, established by the airways back in 1958, back up in the north area there. They honeycomb the area. There just isn't room to-- Something else about this MOA, it looks like it's a large area, but it only gets up between two and 4,000 feet above the ground. You get up in this area, you get mountain peaks that stick up through the MOA. That's the reason we couldn't utilize this area down here. After examining the only area that was left over in this area, that was the driving area in there. Here, we also fly two different type of missions out of the Hill Air Force Base, air combat, air to air missions, the other missions we fly

is air to ground missions. We fly 40 percent air to air and 60 percent air to ground. When I'm talking about air to ground, striking targets on the ground, we'll fly low level, very low to the ground, trying to simulate we are going in under enemy radar, just before we get there, pull up and go into the targets or release the bombs or other weapons. Our targets had to be located on government owned ground. This government ground we own around here is in this area. That's where our targets are located. Being able to conduct our air to ground, air to air missions over here means we can operate simultaneous missions. We need to get the best use out of that air space as we can. We've got the capability at Hill Air Force to (inaudible) enough aircraft and enough sorties to be flown to max out the utilization of that air space, that is, to max it out from sunrise to dusk.

Another question that came up, why do we have to have this supersonic area so close to Hill Air Force? Says, why not go out, fly over the ocean, and why not fly to another range? There are two factors involved with this. The F-16 normally only carries about an hour and 20 minutes worth of fuel; 10 minutes out to the range and 10 minutes back, it only has an hour to operate. In other words, the further you locate this from Hill means the less training you get. Now, also, we have some ranges down in Nellis, and

those ranges are maxed out right now, so this-- we got some other ranges up in Sailor Creek there, marked (inaudible) trying to get up to Sailor Creek, by the time we get-- fly up there, we only have 10 or 15 minutes to train before we have to go back.

Another reason we need it fairly close to Hill, when you are talking about air to air combat, this is-- these are skills that need to be honed on a daily basis. It isn't something they can do for a week or two weeks and lay off for three or four months. It's something they need to do on a daily basis to be prepared if they have to go to war. These pilots are capable or have to be capable of being able to go to war in 24 hours. They don't know whether it's Lebanon or where, so they have to train with that attitude in mind. If they get their supersonic training, if the balloon goes up, they are going to war being deficient in an area. We would like to send them over so they are completely trained in all areas.

In the Environmental Statement, it talks about booms. I'm talking about sonic booms. Talks about 30 to 38 reaching the ground on a given day. I would like to point out this is the worst case, the absolute worst case, and the reason for that is because when they came up with the Environmental Impact Statement, said there are going to be times at Hill Air Force Base, we are going to be hosting

exercises around the United States, that is, aircraft from all over the United States coming out to Hill, and talking about 50 to 75 aircraft. This would normally be in the summer months and two or three weeks at the most. Normally, under normal conditions, all the rest of the time we would only expect eight sonic booms to be generated in this area on a given day. Once again, when a sonic boom is generated, it is one boom, doesn't impact the entire ground at the same time. Someone down here may hear some, and one up here may not. When we are talking about eight sonic booms reaching the ground on a given day, we are talking about sonics down here, hearing one or two, and up here, one or two. It would be spread out over all the whole area. Most of the sonic booms would occur between 20 and 30,000 feet. Normally, that is where the air to air engagements start. Once they pass each other, the air speed drops off very rapidly. They would fly down to an area 5,000 feet above the ground. There's going to be a 5,000 foot cushion, 5,000 feet above the ground, that no one can go to (inaudible) is to damper the noise and the other one is a safety factor, because he would have to quit his engagement before he hits that 5,000 foot buffer zone.

I would like to emphasize that the sonic area that we are talking about down here has no effect, and I repeat, no effect, on commercial aviation, none whatsoever.

Now, that concludes my briefing, and I'll turn the briefing over to Keith Davis.

Keith?

KEITH DAVIS: I would like to very quickly discuss what the Environmental Impact Statement addresses. As the primary impaction as indicated before in an area is already used extensively by the military. Impacts are associating with the new proposal, so the sonic booms that will be in the Environmental Impact Statement, we are restricting that any single location under worse conditions will hear possibly three booms, as many as three booms, 90 percent of the time, possibly go up to five booms, two percent of the time. They are going to be spread out. The main impact, of course, will be on people. The Air Force has looked at 92 studies where people have been subjected to higher than we expect. There has been no documented cases of personal injury because of those. Basically, they are definitely an annoyance. We made an attempt to quantify that annoyance, but we feel they are below livable thresholds.

Also, the document addressed the impact on animals, both domestic and wild. Again, the entities we were involved with, we didn't feel there's any injuries to that-- beef and dairy cattle, no significant impact should occur from these type booms.

Impact on structures, booms, I'm sure you are aware, do rattle structures. There's slight possibilities of window breakage and plaster damage. In all cases where there is already a weakened plaster and pane, these should not initiate new damage at the levels we are talking about.

Impact on terrain, they should not be high enough to impact mine operations, cause landslides, that type of problems.

Impact on (inaudible). The Air Force was involved in a study to look at four supersonic training areas or the land area, the communities under those supersonic training areas. They found no significant impact on area economics, land values, mining, cattle industry, those types of situations. These are the areas that are addressed in the impact statement that we would be interested in hearing comments on those areas.

Give you a brief history what's happened with this impact analysis process. As mentioned earlier, the proposal originated at (inaudible) of 1978. At that time, the Air Force prepared an Environmental Assessment, sent it through command up through the Air Force level. In Washington, they determined in 1980 that that Environmental Assessment was not comprehensive enough to address this issue. They directed (inaudible) to prepare an Environmental Impact Statement. We announced a Notice of Intent. It was

published in the Federal Register in August of 1980. We sent out primarily to state and federal agencies. We also did local news releases. Anyone that expressed an interest at that time was put on a mailing list for the future mailing or anything that went on from that point on, those people were informed. In August of 1983, we then released the Draft Environmental Impact to the public. To date, in 1983, the Air Force was involved in a couple of studies to try to better describe the impacts. That was a primary reason for that delay. Soon after we released the documents, we got numerous public comments saying that they-- there was not enough time to respond, information hasn't been sent out in timely enough manner, so we made the extension of public matter to the 16th of December and scheduled public meetings for this week. As mentioned earlier, these comments, discussions that take place now will then be incorporated into a final Draft Environmental Impact Statement. If the Air Force makes a decision to pursue the proposal, that final Environmental Impact Statement will again be released to the public for comments. That's where we are at now.

THE HEARING OFFICER: May I ask that the house lights be turned up now. Thank you.

I'm very pleased now to have the privilege of introducing to you, Congresswoman Barbara Vucanovich, for her comments.

HONORABLE BARBARA VUCANOVICH, CONGRESSMAN, SECOND DISTRICT, NEVADA: I would like to welcome everyone here tonight, and I would particularly like to thank them for coming and speaking. We had well over 150 people last night in Ely, and I hope we still have people coming in here, because I think it is important. As you may be aware, I requested these hearings earlier because I felt that the Department of Defense and our Air Force, in particular, had not allowed sufficient time for the public comments. I am very pleased that the Air Force has agreed to hold these special meetings, and on behalf of all of us, I want to express my sincere appreciation for this special consideration.

We are all here because we are concerned about too much of our Nevada air space being restricted to military air use. It has always been a problem in some areas of our state. With this latest proposal, I must say I believe the Air Force is simply asking for too much. With distances as great as they are in Nevada and with communities as isolated, air travel is an absolute necessity, and that need is not being recognized by the Air Force. In fact, the proposal before us would restrict so much air space that general aviation travel to certain parts in our state would no longer offer the significant time saving that it now does. This would increase the isolation of communities near

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the SOA or under the MOA and would represent what I believe is an unacceptable level of government control over our air space.

This meeting is to discuss these and other problems that we, as Nevada citizens, have with regard to this matter. I want to encourage everyone to speak up here forcefully and to demand that they satisfactorily try to answer questions. I realize there are a lot of people who would like to speak tonight, and I hope they will. I would like to just pose a couple of questions that we hope the Air Force will answer. If they don't answer right away, I'm sure they will before the evening is over or before the EIS is finished.

I understand that the Air Force is not actually enlarging the MOA, but they are redrawing the lines to allow a slightly larger corridor into Salt Lake City. The corridor is a strip very narrow and doesn't allow much leeway for correcting course errors. What did the Air Force use to determine this change? 142

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Secondly, I really am concerned as to how this will affect our private citizens, and I'm talking about ranchers and people who live under or near the MOA, and, of course, I'm concerned about the livestock.

But, I won't talk any longer because I would like to hear some of you get up and ask some questions.

Thank you all for being here, and, again, thank the

Air Force for conducting these hearings.

THE HEARING OFFICER: Thank you, Congresswoman Vucanovich.

May I now ask Senator Glaser to come forward and address you.

HONORABLE SENATOR GLASER: Congresswoman Vucanovich and friends and neighbors, I appreciate the opportunity to express my views here tonight and also appreciate the Air Force in bringing this hearing to Elko. I am a member of the Nevada Legislature. My Senatorial District runs from the Utah border over by Wendover to the California border north of Reno, from the Oregon border to Central Nevada. I am appearing today in opposition to the proposed enlargement of the supersonic operation area, and I think-- I think for most of my colleagues in the Nevada Legislature. I'm going to give some broad, philosophical expressions of my views, and I think their's, and of our Staff Assistant with the Nevada Legislative Counsel, Bob Erickson, will follow me and will give his detailed analysis of the Environmental Impact Studies as he sees it.

I feel that the Draft Environmental Impact Study does not adequately address the impact that the SOA will have on the quality of livestock or residents of the area or on the ranching or the mining or the industries in the area, in presentations that were made here. No one can be sure of

the physiological and physiological damage that might occur to the individuals, to the livestock, or wildlife to the area. There hasn't been enough research done in this area yet. I would also like to point out, in the narrow corridors that they will be operating in is the (inaudible) Town of Wendover. Wendover is growing by leaps and bounds and becoming a very important economic asset to the State of Nevada and to Elko County.

Now, I recognize the importance of a strong military and training of Air Force pilots, but I would like to point out, Nevada, over the years, has contributed more of the surface area to defense, to atomic energy, to disposal of radioactive waste, than any other state in the Union. In recent years and in the recent months, there has been a strong move by the Department of Defense establishment to balloon these areas. Encroachment is being made not only on the ground on the water resources, but in the air space. I know that they've given some assurances that small aircraft will be allowed to fly over some of these areas. Let me point out that not too long ago I flew with a friend to Las Vegas, and we had to go to Las Vegas by way of Cedar City in order to circumvent the Nellis air space and their testing grounds, and he told me, he said, you know, when the Air Force was holding hearings on the establishing of Nellis Air Force Base, that they assured us that small craft could

fly in and out and through this area; now, in recent years I have not been able to go directly. I was buying the gas on that particular trip, and I was buying the gas on that particular trip, and it cost me an extra 50 on that trip.

The Nellis base in Clark County just recently expanded its area and moved another 40 miles east, many thousands of square miles have been added to that area. The Navy base at Fallon wants more surface area and wants to balloon its supersonic space east out of Austin and Battle Mountain. The air base at Ogden, Hill Air Force Base, now wants to expand the supersonic military operation area, not only in Utah but across the border into Nevada. Well, Nevada has become rather sensitive in recent years because of our sovereignty and dominion, and I guess it's because we have so little of it. The dismal statistics is that 87 percent of our surface is controlled by the federal government, and I suppose that is why they always look to Nevada to expand defense operations areas.

I'd like to conclude with this thought, that we don't have much land in private ownership in Nevada. We don't have much water in Nevada. The Great Basin is the driest in the Union, but we do have abundance of sky. Now, Uncle Sam wants to move in to that area and preempt us from it. This proposal will take two percent of the Nevada air space, over 2,000 square miles, some 1.3 million acres. I

contend that it's an excessive demand, that they ought to go back to the drawing boards and see if there is some way they can consolidate that land and make it more compact and do like we do in Nevada where we have multiple type use

Thank you, very much.

THE HEARING OFFICER: Thank you, Senator Glaser.

I request Mr. Robert Erickson to come to the microphone. I might note, I'm permitting Mr. Erickson to speak, and this may appear to depart from the proposed speakers; however, I believe Mr. Erickson is speaking on behalf of the Senator.

ROBERT ERICKSON: Thank you, Colonel Casari. Senator, Congresswoman Vucanovich, and ladies and gentlemen, additional comments based on the Environmental Impact Statement, I think the first thing I would like to point out is that almost all of Nevada, you can check it on the maps, contained in the EIS, almost all of Nevada falls more than 100 nautical miles away from the (inaudible) yet, on page 2-6 of the EIS, it states that the hundred nautical mile criteria is applied to the F-16 training area. Alternative analysis, since greater distances, namely going into Nevada, would preclude a sufficient amount of time devoted to actual supersonic flight, air combat training on each sortie, a significant reduction of training time in this manner, again, over 100 nautical miles would severely impair the unit

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capability in meeting mission requirements, and in all deference to our friends over in Utah, I think that this proposal perhaps should not have considered the air space over Nevada. We have plenty of air space that's being withdrawn now from Nellis and now the Fallon Naval Air Station, and I would ask that the Air Force examine that 100 nautical mile criteria and see if the Nevada air space is truly needed for this proposal. 283

The second point I would like to make, and the final one, has to do with what I believe is an inadequate evaluation of designating the north area shown on the map earlier as a possible area instead of the southern area. I noted that the Colonel, or Mr. Davis had a map up that was not included in the Environmental Impact Statement. That map showed a commercial airways in the area that is not contained in the Environmental Impact Statement. There is no discussion on what kind of use is made over that north area in terms of commercial aviation. How difficult is it for these routes to be adjusted if that north were to be selected instead of the area being (inaudible) The Environmental Impact Statement gives four reasons why the north area was not selected. They did mention that it is better that it is completely within 100 miles, excluding that Nevada portion, but most of it is within 100 nautical miles of Hill Air Force Base, making it more feasible for the training 284 284 282 282

sessions that are needed. First of all, page 21, it states that several commercial over the Lucins MOA area, and again I would ask how often are they used, might there be some adjustments, and what about the corridor that exists between that north and south area, is that an alternative. Secondly, the population as was built up quite a bit in the Environmental Impact Statement, it stated that the area, Gandy Extension, had a much smaller population or significantly smaller population than in the Lucin MOA area. However, when you start reading details of the report, the population in the Lucin MOA is 400 as opposed to the Gandy Extension being 254. When you delete Montello with 180 people and Grouse Creek, it's only left with 105 people, perhaps out in the Salt Flats only a hundred people or so. So, what I'm-- what I'm suggesting is for the Air Force to take a look at possibly combining the restricted area R-604 and portions of the Lucin MOA into one area for this type of operation.

In addition, the report went on to say that topography in the northern area was basically not as good as that in the south, because in the south the mountains could be used to mask various sorties. However, if the aircraft is to fly at 5,000 feet above the ground level, it would seem to me to be impossible for the Nevada site for any aircraft to operate and mask their missions between-- behind mountains. Look at the topography, shows that low

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elevations in Nevada in the proposed SOA is about 5,000 feet elevation, the highest peak in Nevada in that area is about 9,600 feet. Most of the valleys, indeed, are about 6,000 feet, and most of the mountains are between eight and nine, therefore, making that area not ideal or not possible to run those supersonic missions below the mountain level.

Finally, there was talk about the SHUS antenna arena network, and it's my understanding that this network exists in the north as well as the south. They propose to upgrade the area in the south. I would ask why not upgrade the area in the north instead. I would ask that (inaudible) exists 64-4 and a portion of the Lucin MOA and see if there might not be a way to lessen some of the environmental impacts and some of the concerns that have been raised here in Nevada. 41 41

With that, I thank you for your time.

THE HEARING OFFICER: Thank you very much, Mr. Erickson.

Nevada State Assemblyman, Bill Bilyeu, if he's here, the microphone is yours.

HONORABLE BYRON L. BILYEU, ASSEMBLYMAN: Thank you, Colonel.

Congressman Vucanovich, Senator Glaser, ladies and gentlemen, there's not much that I can add to what Congressman Vucanovich has already said, what the Senator

and Bob has ably said. Our concern, the impact that I've gotten back from most of my constituents about the grave concerns are about the proposal. They do not think the Environmental Statement has been adequately assessed. I hear a great deal of comment, particularly from private pilots, as sometimes a private pilot, myself, I had the experience of trying to thread the various corridors. I sometimes suspect that the Air Force doesn't talk to the Navy, and the Navy doesn't talk to the Marines, and the Department of Defense does not correlate all of them in terms of MOA's and SOA's, and I think we already have so much of our area taken up by the Federal Government, the military, and I tell you in all honesty, I think you ought to look eastwards, perhaps over Dougway. I don't know what sensitive labs they have over there that required them to move. I wonder why that was not looked at harder.

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But, the concerns that we have here in Nevada was with so much of our resources taken up by the Federal Government. General aviation is so important to us in terms of physically getting from here to there. It is so important to us that to further restrict our air space, God love us, we all are strong for national defense in terms of Elko and Eureka Counties which I represent. My friends out in Ely, I don't think you'll find more stronger people who are stronger for national defense than those people. But, we have

had so much of the imposition, because we are sparse in population, of the Federal Government and military on us. Enough is enough.

Thank you.

THE HEARING OFFICER: Thank you, Assemblyman Bilyeu.

It is now time to accept comments, questions, statements from the public. I earlier announced the goal of five minutes, outside limit of 10 minutes. Perhaps, I was a bit too sanctious in my assessment of time. I think it would be proper, probably, therefore, I will ask the speakers to restrict their comments to seven minutes. I'll warn you at five.

Thank you.

Mr. Thomas E. Sims.

THOMAS SIMS: Thank you. All of the gentlemen here tonight, this doesn't-- does deeply concern me because out in that valley I am-- I am the owner of the Crystal Ball Cave that has many tourists. Eventually, it will be a National attraction. Along in that valley, I was born and raised. I have a brother and sister that make their livelihood from Gandy, clear down through Calico. My brother lives right next to the Salt Flats where they (inaudible). One thing that bothers me with the aircraft flying in there, presently, the Air Force on their boundaries has a patrol

with a helicopter, and you couldn't drive out from my brother-in-law's a mile without having-- being picked up. If this continues, will that whole mountain be picked, nobody would be able to fly in that whole area. I have also mining properties there on the north-south end of the mountain, Kearns Mountain. My brother and them work at Goshute Mountain above Calico, and that's their livelihood and income for Calico. Anyplace any mining is going to go on is a livelihood for many people. I got a real concern, and I think being born and raised in Nevada, we should keep what we have.

Thank you.

THE HEARING OFFICER: Thank you very much, Mr. Sims.

Mr. Bill Krueger.

WILLIAM KRUEGER: I'm William Krueger. I live here in Elko. I am a member of the Board of Directors of Nevada Wildlife, and I have a letter here from the President of the Nevada Wildlife Federation I would like to read. It is addressed to the Environmental Planning, Headquarters AFLC/DEPV, Wright-Patterson Air Force Base, Ohio.

"Dear Sir:

"After careful review of the Gandy Range Extension DEIS, the Nevada Wildlife Federation is strongly

"opposed to the proposal. We would be in favor of alternatives b, c, or d as addressed on page two of the DEIS.

"On page four, the DEIS states, environmental impacts are considered minimal in all respects except the noise resulting from sonic boom activity. At a rate of 100 to 125 sonic booms per day, the Federation feels that this is a significant impact on the environment.

"The DEIS states that on page five that questions on long term protracted exposure and sublevel responses of wildlife remain to be studied. On page 46 of the DEIS we read, one study indicated that sooty tern reproduction rates were severly reduced when the eggs were exposed to intense sonic booms. The Federation wishes to point out that the proposed area is some of our finest deer winter range. What will the sonic booms do to the rut,

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"and what effect will the stress of the booms have on the pregnant does? Will this stress result in a higher fawn mortality? The DEIS states on page 46, the most delicate and sensitive behavior of animals is that associated with biological reproduction.

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"Also of importance to us is the fact that the valleys of the proposed area are among Nevada's finest trophy antelope habitat. Will the booms interfere with antelope reproduction, or will the booms make them more vulnerable to hunters?

"Quoting from the DEIS, page 57, which is a quote from the Wilderness Act of 1964, Wilderness as described in the Act is to be an area untrammeled by man, with the imprint of man's work substantially unnoticeable, and that has outstanding opportunities for solitude. We feel the proposal hardly fits the description of a wilderness area. The Goshute WSA recommended

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"for inclusion in the National Wilderness Preservation System in the May 1983 BLM DEIS as the preferred alternative is totally included in the proposed operations area. The area is immediately adjacent to the South Pequop and Bluebell WSA's, which have received the same approval by BLM as the Goshute Peak WSA.

"Quoting from the DEIS, page 59, Recreational activities now taking place in the land area beneath the proposed supersonic flight airspace are of the outdoor wilderness experience nature, activities including hunting, hiking, camping, etcetera. These are activities where the values of unspoiled nature are deliberately sought. Because of the remoteness of the area, the total number of people participating in these activities is expected to be small.

"The Federation wishes to point out that in our arid and harsh state, areas of this nature are scarce. Our population is growing rapidly, perhaps

"the most rapidly in the nation, and recreational demands on this area will increase significantly. The White Pine Power Project DEIS of October 1983 cites the preferred location of the generating plant in North Steptoe Valley. This site is less than 50 miles from the proposed operations area. The WPPP DEIS states on page 10, at the peak of construction, the total population of White Pine County will be nearly 50 percent more than its projected level without WPPP. The increased population will place an increased demand on outdoor recreation.

"The Federation wishes to discuss one final point, that being raptors. According to the BLM's Draft Wells Resource Management Plan and EIS, of major significance in the Goshute WSA 5,000 to 6,000 raptors, including goshawks and golden and bald eagles, have been observed migrating south each fall. This does not include the resident raptors. What will be the effect of

"the supersonic booms on these raptors? Will the booms alter their forage supply? Will the booms disturb nesting, and reproduction?

"Of at least equal importance, what will the effect of the raptors be on an F-16? Here at Nellis Air Force Base, outside Las Vegas, a civilian falconer is employed to keep small birds off the flight line. Some range personnel have expressed concern that if wild horse populations are not controlled, starvation may attract carrion birds that could be a threat to jet aircraft. The operational altitude proposed for the supersonic operations area is certainly well within the soaring altitude of the raptors inhabiting the area.

"At a replacement cost of $12 - 16,000,000, the loss of one or two F-16's to a raptor would certainly exceed the cost of any temporary duty assignments for training in a more suitable area both environmentally and tactically.

"While the purchase of an F-16
and payment for temporary duty
might come from different budgets,
the taxpayers are footing the bill."

Signed, Sincerely, John A. Leitch, President.

Thank you.

THE HEARING OFFICER: Mr. Chilton, as for the record, indicated a request to be called last. I will honor that request.

Mr. Thomas H. Gallagher?

THOMAS H. GALLAGHER: I'm Tom Gallagher, Elko. I am Chairman of the Aviation Committee, Elko Chamber of Commerce. I have gotten into this from my interest as a pilot and also from our-- the standpoint of the air service that we are presently enjoying in Elko and wonder if it will continue.

Recently, the air carrier that serves Elko has stated that his cost will be considerably increased with having to go around the supersonic area. I think that one thing that has to be particularly addressed, Colonel, you did lightly, I believe, is the question, and I have addressed this to Congresswoman Vucanovich and Senator Hecht and also to Senator Laxalt's offices, that perhaps there is a possibility to place more of this activity down in the central part of the state, in the Nevada Test Site. And, I really

do think that there is a need for Congressional review relative to the expansion. We all heard about the Navy's area, and now the Air Force area for their test sites, and I think that that should be studied closely. There's a tremendous area included in the Nevada Test Site, and I think that the possibility of the Air Force, the Army, and Navy, and Marines being asked to work closely together in that area might solve this problem.

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As far as our comments, Colonel, about the fuel used to go from Hill Air Force Base down to this test area, and that reducing their maneuvering time and/or flight time in the test area, I'm sure that all these pilots have to put in a certain amount of flight time, whether it's cross-country time. And, cross-country time in an F-16 from Hill Air Force Base down to the Nevada Test Site, I think would just serve to fill in their requirement-- required flight time, even if it did cut down slightly on their supersonic time once they got there. But, I think this problem, the problem around Fallon and the problem that we see in this Gandy area, should be addressed in a Congressional review of just how necessary it is to expand these areas and wouldn't it be better to consolidate the areas and get them all down there in one place and we can fly around them, or possibly with permission, fly through them.

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Thank you very much.

THE HEARING OFFICER: Thank you very much, sir.

I have a card from Dr. Kenneth S. Allen. Dr. Allen does not wish to speak. He requested that I read the following question into the record and determine if the Force is prepared to give a response.

If additional air space is going to be taken, can the Military and FAA work together in terms of joint use of the air space, especially IFR through the MOA's? Please comment.

I have inquired of the Air Force Team Chief, and I'm advised the response will be made by Lieutenant-Colonel Grant Hackman. I would ask Colonel Hackman to state for the record where he is stationed and his duty position there.

LIEUTENANT-COLONEL GRANT HACKMAN: My name is Lieutenant-Colonel Grant Hackman. I'm a pilot in the Air Force and also the Air Force representative to the Federal Administration concerning the policies of joint use.

The stated policy in our-- all of our air space will be joint use to the maximum extent without segregating our mission. I think you'll find that if you review the Air Force air space across the country, you'll find that a greater percentage of it-- I don't have the figure, but very, very large percentage of it is joint use, especially the air space that we are talking about, Utah Testing-Training Range, test space probably has some of the best joint use

working arrangement of air space in the United States. This applies to both the military operations area air space as well as the restricted area air space. We handle the joint use in two different manners. One, whenever we are finished with the air space or we don't need it for, say, some reason, the aircraft at Hill are sitting down for a day, we don't even call up the air space, the FAA has it to use as they see best fit. That, let's say, would be a strategic type use. We also have a tactical type joint use, when in, say, for the next 30 minutes we are able to work civilian aircraft through it, in fact, there again, I think we have one of the best arrangements in the Air Force on the Utah Testing and Training Range due to the sophisticated type of radar and radio equipment that we at Hill have at the Clover Control that would provide this service through the area. And, I think that you'll find if you talk to one of the air carriers, I'm not sure which one serves. This particular one I've in mind serves Ely. That might be the same carrier. I think if you talk to their operations folks, you'll find often they are provided direct access through that air space.

I hope that answers the question.

THE HEARING OFFICER: Is that satisfactory to Dr. Allen? Apparently so.

Thank you.

We thank Dr. Allen for his question as well.

Ladies and gentlemen, we've been going about an hour. I think this would be an appropriate time for a five minute break.

Thank you very much.

(Whereupon a recess was taken.)

THE HEARING OFFICER: This hearing will come to order.

Will Mr. Tony Atkins come to the front of the auditorium and address his remarks to the group, please.

TONY ATKINS: I'm a private pilot and also work in the minerals industry in the area. I think the expansion of the military operations is a poor idea, one, on the basis of being a private pilot, I fly a 172, not an exactly high-powered aircraft, and I really feel that I have a real problem in crossing a (inaudible) if an F-16 is flying.

The work in the minerals industry, using airplanes is often real handy to look out crops and-- and the same thing, if I'm flying around and terrain-hugging fighters comes through the area, there's going to be some problems. The military has a lot of space in Nevada. It's a real sport to choose this property. I fly the FR, so I go with the winds and the weather, and just the expansion of these areas is going to create additional hardship for civilian aircraft in my work as a geologist looking at landscapes. I think it's a very poor idea to expand this area.

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THE HEARING OFFICER: Thank you, Mr. Atkins, for your comments.

Dr. Richard Bergin.

RICHARD BERGIN: I know the Air Force is getting tired of hearing from me here. I'll be under my seven minutes.

First of all, once again, for the benefit of the people in Elko, the executive (inaudible) statement on behalf of the Nevada State Medical Association, the statement of opposition of the concept of the supersonic flight at low altitudes over human beings, this opposition known on the scientific data as a possible hazard to human health and welfare. My personal position upon reviewing the documents, upon many bases, is that it-- the documents we are reviewing, we do not really have to discuss alternatives. This document is a document from the scientific point of view. The entire document is based on a medical (inaudible) of air combat maneuvering and predicted (inaudible) will be that will be generated by sonic booms. The document underestimates these effects by various rather subtle but unscientific ways of perhaps defining threshhold. I would like to (inaudible) 4952 (inaudible) by William Gallaway who is responsible for essentially (inaudible) air combat maneuvering air space. Now, just so you realize it is not my idea, he states that this model, and this is very

important to realize that this entire document, all the measurements, all the predicted over-pressures, even allowing that over-pressure is only one parameter, that is important to assessing a human response to a-- only one parameter, not the major one, but even allowing for the sake of argument, Bill Gallaway says that this model is not validated by any sound level measurements. The data used to develop the model assumes for (inaudible) in remembering that (inaudible) of special distribution are sparse and have been fully analyzed. The applicability of the model to other aircraft having different performance characteristics or to other combat strategists is unknown. Gallaway states very clearly that the present knowledge that the Air Force glosses over in this document is not sufficient to predict any of the results that they do predict, simple things that bring to mind, the lack of economic impact. The Air Force conducted a study in (inaudible) and, for instance, what they don't tell you included in the economic impact are the Cities of Phoenix and Tucson. Now, if they are not receiving any sonic booms, you would not expect the land values to decrease. Land values could go to zero in the rural areas and still not establish (inaudible) actually affect the area under study. The Air Force states there's no known instance, no human beings, just one instance, a court case was litigated in Federal Court, a lady was cut

by flying glass secondary to sonic boom impulse. I think it's Cox versus Halaby. I'm not certain of the court case exactly. The lady lost her court case under the federal court claim act on the basis of the government's discretionary function exclusion. I (inaudible) a number of exclusions, and there are many numerous examples of these things, and I invite the Air Force's representative to our court case in Reno if they would like to be more fully informed on the various aspects of this problem.

The Air Force makes great note that the Chabahudney EPA data say that sound levels will be appropriate to residential neighbors and should not bother anyone. However, in talking personally with people who worked (inaudible) groups--

THE HEARING OFFICER: Two minutes, doctor.

RICHARD BERGIN: In noting Gallaway's report, it is quite clear as he says, the working group that generated this result was uneasy about the recommendation, in fact, some members disagreed completely, but needed to provide an interim result. What we are faced with, very briefly, is an action that's necessary for the military to train in a certain fashion that should not be done over human beings, and I think it would be appropriate if a Congressional investigation was undertaken, that an area, as the previous gentleman noted, be chosen for this type of activity, that people be bought under the laws of eminent domain, if necessary,

but people are allowed to suffer to the extent that their Fifth Amendment rights are violated by this action. It wouldn't happen unless either our Congressional people take action very firmly and directly or our legal recourse is successful.

Thank you.

THE HEARING OFFICER: Thank you, doctor.

Mr. Dick Holmes.

DICK HOLMES: I'm Dick Holmes, and I'm here tonight representing the Lahonton Pilots Association. Last night, I was representing concerned rural Nevadans. Norman Glaser commented about the various areas of our state that were used. I thought you might like to see a pictorial representation of it. Thank you very much.

This, of course, is the State of Nevada that I have outlined in green. We've got orange area, and the Utah, and so on and so forth. This is the area that you viewed on the slide earlier. This is the proposed supersonic operations area that the Air Force is planning. Now, of course, the Air Force is already operating supersonically in this area at the Nellis. This 5,700 square mile area in the center is the area that the United States Navy is proposing for central Nevada and, of course, this is another area for the Mountain Home base up in Idaho, Northern Nevada and Oregon. But, one of the significant things it

seems to me about (inaudible) in looking at this map is the shortest distances that you notice between the military (inaudible) and this distance is probably 40 nautical miles, oh, this is a little longer, maybe 40 or 50 nautical miles. This is Tonopah Airport, to give you some perspective, this is the Gabbs military operation at Fallon. Again, we are talking about 60 miles, so basically, in the original concept we had what has been referred to by the military as a continual operating range, which they have extensively (inaudible) but, nevertheless, are implementing piecemeal.

Thank you very much, fellows.

I'm especially pleased to see Barbara Vucanovich, again. They were at the meeting in Ely last night, and Normal Glaser and Bob Erickson. Pete Kelly, and Bill Farr are here representing Senator Hecht. Last night, Linda Ryan was at the Ely meeting, representing Governor Bryan. Is there anybody here tonight who is representing Senator Laxalt? I don't believe he was represented at the meeting last night or at the meeting in Ibapah. I'm sorry about that.

Are you representing Senator Laxalt tonight?

So, somebody here is representing him. Thank you very much.

THE HEARING OFFICER: Mr. Farr indicated that he would accept as representative.

MR. ~~FARR~~ HOLMES: I will accept that. This is my statement.

On several occasions, the Air Force and the Navy have insinuated that the authority to conduct their activities in our air space resides in them and that after satisfying the requirements of the Environmental Impact Act, they may operate in any manner which they deem appropriate, regardless of the consequences to any individual.

But, this is misleading, and the following should be forceably pointed out, that the sole responsibility for controlling the use of our air space is invested in the administrator of the Federal Aviation Industry who is appointed by the President, and who operates under the directives and convenience of the Federal Aviation Act. The administrator alone may designate certain air space as restricted in order to confine hazardous activities and to protect non-participants or he may revoke that designation. He may assign or revoke civilian and military joint use air space and military training routes. He may issue or suspend, waivers of rule that regulate air space. He may confer with the Department of Defense or any other governmental agency about the desirability of taking these actions, and this is a point of emphasization. What he cannot do is ignore the directions of the Federal Aviation Act, one of which clearly states when an aircraft activity conducted in special use

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air space could affect the safety of person or property on the surface, provisions shall be made for protection.

THE HEARING OFFICER: Two minutes, sir.

MR. ~~FARP~~ HOLMES: The Air Force in Nevada, Utah, New Mexico, Arizona, and Texas are now proposing just such an activity. Their stated justification for the trespasses is the need to prepare a national defense, and each proposal is enforced with the written statements, there is no acceptable alternative, and with the other (inaudible) economic support is the community frustrates their plans. In recent years, the military organization has become so influential there are some that view it as a fourth branch of the government and not merely as an agent of the Department of Defense, and there are others that seem (inaudible) by (inaudible) of the needs to be reminded of his responsibilities. However, our elective representives should make every effort on the various military units (inaudible) cooperate with each other and coordinate their activities in such a way as to produce the least environmental impact on sparsely populated areas, also make substantial contributions to our national strength and character and (inaudible) who live in more populated areas.

And, in the final analysis, is it is (inaudible) that there is no possible alternative to destroying our habitat in order to provide a national defense, that our

elected representatives should come to us and explain in convincing terms why this must be so and what provisions will be made to compensate individuals for property destruction and devaluation and for the disruption in their lives.

Thank you very much.

THE HEARING OFFICER: Thank you.

Mr. Holmes-- I might note-- I'm very sorry, sir?

MR. FARR: Let the record note that the text was not deviated from last night, and Mr. Laxalt's representative was in attendance at that meeting.

THE HEARING OFFICER: Very well. Mr. Farr has asked that I note for the record that it was identical as to that that was read last night at Ely, and Senator Laxalt's representative was present at that meeting.

Mr. Holmes, if you wish to provide either the documents that you displayed to the group or a duplicate to the Air Force, I think they would be pleased to have it incorporated in the--

MR. HOLMES: I left a document with you last night.

THE HEARING OFFICER: I was referring now to the map exhibit, sir.

MR. HOLMES: I see. All right.

THE HEARING OFFICER: I'm not mandating it. I'm-- If anything, I'm simply affording you the opportunity if you choose to do so.

MR. HOLMES: Thank you.

THE HEARING OFFICER: Certainly.

Mrs. Joanne Garrett, the microphone is yours now.

JOANNE GARRETT: I'm Joanne Garrett, and I'm a resident of Baker, Nevada, just south of the proposed supersonic freeway. I'm a member of the Board of Directors of the Citizens Alert, on whose behalf I'm speaking. Citizen Alert is a statewide Nevada public education and citizen action organization that's been active for eight years in nuclear and public land issues. We first become aware of the Air Force's proposal that was in an article in the newspaper about 10 days before the comment period was scheduled to end on October 14. Without citizen action, local residents wouldn't be having this opportunity to speak with the Air Force, today, because there wouldn't be any public hearings. We are pleased to see the Air Force complying with the minimum requirements of the law, the National Environmental Impact Policy Act.

I would like to focus on Citizen Alert's primary concern about this proposal. Gradual control of Nevada lands and air space by the military, according to BLM's 1982 Public Land Statistics, Nevada has 3,935,000 acres of land dedicated to military and military areas. This is 5.6 percent of the state's acreage. This is the highest percentage of any state in the Union. From the MX missile to

nuclear, federal governments continue to turn to Nevada to solve its problems. Nevada, by assuming the nation's burden for dangerous nuclear weapons testing, the nearly four million acres indicate the degree to which Nevada is already controlled by the military, yet, that Draft Environmental Impact Statement that we are considering doesn't acknowledge this larger picture, that is, the-- the amount of land and air space already committed to the military. The Navy currently is trying to tie up 5,700 square miles of central Nevada air space. The Gandy proposal and Navy's proposal total area is almost the size of the State of Massachusetts.

Citizen Alert believes it is the responsibility of the citizens and government of Nevada to question the impact of this impact on our (inaudible) and citizens of this state and certainly (inaudible) gratifying and unanimity among all the people about this proposal. The intrusion of sonic booms and supersonic flights over land not controlled by the military is unnecessary where nearly four million acres is controlled by defense related agencies. The alternatives too are presented as if there are no alternatives. We don't believe it. If the air space under consideration were off limits, we believe the Air Force could find an SOA over military controlled lands that would not infringe on the lives and livelihood of rural people. The military branches should cooperate and not compete to find alternatives

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to expansion of SOA's. As Dr. Bergin so quietly indicates that the DEIS does not seriously address the affects of sonic booms on humans and animals, impacts of the proposed action, our local economy, including ranching, tourism, and business economic development, are all very seriously around Ely where I live inadequately addressed, if at all. And, as Mr. Krueger comments, DEIS ignores the wilderness study areas, and more important, migration routes. 147

To conclude, Citizen Alert believes this DEIS, we do oppose supersonic over land not controlled, and, finally, we urge the Air Force to involve the public fully in the process as required by the letter and spirit of Nevada. 147

I would like to apologize to the people, everyone who has had to listen to this twice. We thank the Air Force for the opportunity.

THE HEARING OFFICER: Thank you, Mrs. Garrett.

Mr. Wright is present. I call him to come forward to the microphone.

BILL WRIGHT: My name is Bill Wright. I'm a rancher, and I speak only for myself. Certainly, if I were underneath the area of the sonic booms, I would be very concerned about my livestock and myself. I am simply for those people, very much for those of us who aren't-- I certainly that, for example, in the USSR, only a professional hunter can even have a gun. These guys are practicing to

protect our freedoms, among which are hunting, the enjoyment of our wildlife, which we all do. I'm very much a back-country man, myself, spend a tremendous amount of time out in this Moaz, in and around the Moaz, which are not in the supersonic areas, and the game that they are going to hurt, or the wildlife they are going to damage, forget them. I feel very strongly about that. We have a lot of freedoms here, and these guys aren't just up there doing this for themselves.

THE HEARING OFFICER: Thank you very much, Mr. Wright.

May I more formally identify the person of Mr. Farr.

MR. FARR: I am Bill Farr, who is the Northern Nevada Administrator for Senator Hecht of Nevada.

THE HEARING OFFICER: Mr. Mark Chilton?

You wish the viewgraph turned on? Would you please, whoever is at hand, someone turn on the viewgraph.

MARK CHILTON: Thank you very much. My name is Mark Chilton. I am Chairman of the Board of Chilton Engineering. I would like to express my appreciation for Congressman Vucanovich and the elected officials and gentlemen of the Air Force.

Ladies and gentlemen, our firm has three offices, in Elko, Las Vegas, and Reno. We have four pilots that are

also engineers in the firm, and we fly extensively throughout the State of Nevada. The expression of concern that Senator Glaser had on a flight we were making from Elko direct to Las Vegas, which is-- penetrates or at least flies over the MOA, the desert MOA. At the Rotary Meeting some years ago, the Air Force did advise us that there would be freedom of general aviation operation through these MOA's. That is true in the case of IFR flight plans. IFR cannot separate, therefore, they will not give you an IFR clearance to go through the MOA. To that end, we who do fly IFR are required to deviate additional distances to circumnavigate or go VFR. If we don't go VFR, however, there are occasions when it does occur, that the MOA's are actually safety hazards, involving undue restrictions on IFR flight plans. I asked for the view chart to be shown to ask if the Air Force would please conduct a study that would possibly combine Victor 6 and Victor 32, namely, the airways Victor 6, Lucin to Ogden, Victor 32, Wendover to Salt Lake City, in a corridor wider in the area in the Victor 32. I request this on the grounds that an instrument approach cannot be made to Wendover when the areas are hot due to the procedure turn required there has caused our company flights to deter from Wendover into Salt Lake for a landing in instrument weather. The reason for it is the necessary breadth of the flight plan or approach into Wendover.

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The second thing that becomes a concern, we don't have a lot of thunderstorms in this area, but when we do, and it requires sometimes IFR to penetrate or come very close to the thunderstorms because of the inability to get a deviation through that corridor. If Victor 6 could be possibly realigned or eliminated, then maybe your sonic boom could be conducted to be referred to in the EIS, that would be more favorable to and closer. I'm also connected to the MOA's just west where center cannot actually separate you from areas, when you penetrate Victor 32 at altitudes that have been referred to and are considerably above or in the same area as the minimum enroute altitudes in IFR flight plans. Victor 32 extends from Elko through Wendover to Salt Lake City. Victor 6 runs north of Elko through Wells, Lucin, Ogden, and I-- my situation, have they studied widening this corridor which would eliminate the problem of procedure approach in Wendover and also give us more deviation when IFR is trying to circumnavigate by the possibility of eliminating Victor 6.

Now, for my other side of my presentation, this I would like to refer to as a question to the scientific or the research side of the EIS. When, in fact, the mention was made as to the effect that sonic booms have on livestock, not long ago I acquired this exhibit from a friend of mine who is a longtime native of Elko, and he alleges that this

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phenomenon was caused by sonic booms during the pregnancy of the mother cow. The exhibit is commonly known as the two-headed calf. The question that I would bring to the Air Force at this time and to the ranching community is that the impact it would have on the economics of the cattle as to whether or not the calf would eat twice as much and gain twice as fast, and that would be a positive, or eat twice as much and stay the same, which would be a negative.

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I thank you very much.

THE HEARING OFFICER: Thank you very much, Mr. Chilton.

All those who have indicated a desire to speak have spoken. We have a few minutes, and I now inquire of the group whether anyone who has not previously spoken has a desire to speak?

Yes, sir?

JIM POINTER: Keith Davis asked me to pass on a little information that probably should be more looked into by the Air Force in this proposal. First of all, my name is Jim Pointer. I'm with the U. S. Fish and Wildlife Service in the Goshute range of mountains. It appears to be a rather heavily used raptor core of migration corridor. In the latter part of September, there has been a man out there that has been studying this over the past several years, and last year he banded it 1,000 raptors. Primarily, that means

goshawks, coopers and sharpskinned hawks, and during the time that he was there they also kept records of the numbers that passed by, and they banded 10 percent. That means there was 1,000 banded out of 10,000 that passed through. In 1982, he banded approximately 600, and in 1981, about 300. It may be a point that needs to be looked into, primarily, for the safety of the pilots and the aircraft.

Thank you.

THE HEARING OFFICER: Thank you very much, Mr. Pointer.

Is there anyone else that wishes to speak from the group?

Very well, I may then conclude the meeting with thanks to you all for your courtesy which we have found virtually unfailing throughout the three hearings that we have conducted.

I would also like to again thank Congressman Vucanovich for being present with us. Also, Senatory Glaser and Commissioner Smith, we greatly appreciate their attendance, and the attendance of all of you.

This meeting is adjourned. Thank you very much.

-oOo-

REPORTER'S CERTIFICATE

I hereby certify that I, RAYMOND T. HELME, Certified Stenotype Reporter, in and for the County of Elko, State of Nevada, was present on Thursday, December 1, 1983, at 7:10 P.M. of said day, at the Public Hearing in the matter of the Supersonic Flight Training Proposal.

That as such Reporter, I took down in Stenotype Shorthand writing the entire proceedings and testimony given in said Public Hearing to the best of my ability; that I thereafter caused said stenotype shorthand to be transcribed into longhand typewriting; that the foregoing 52 pages constitute said transcription; and that the same is a full, true and correct record of the testimony taken and proceedings had at said time and place.

Dated at Elko, Nevada this 17th day of December, 1983.

RAYMOND T. HELME, CSR

WRITTEN COMMENTS

SUBMITTED IN CONJUNCTION

WITH ORAL COMMENTS

These comments were reviewed and were not significantly different than the comments given during the public meetings. Therefore, separate responses were not provided.

Comments on the Draft Environmental Impact Statement (DEIS) on the Establishment of the Gancy Range Extension and Adjacent Restricted Airspace as an area for Supersonic Flight Training.

Submitted by: Rao and Phyllis Bateman
Kyle and Ranae Bateman
The Parrish Ranch
For presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah
29 Nov 1983

INITIAL STATEMENT: We, the above named ranch owners and Ibapah (Deep Creek Valley) residents of long standing want it known we strongly and absolutely oppose the Air Force proposal to increase restricted airspace along the Utah-Nevada border for supersonic flights and training space for F-16 fighter planes of the 388th Tactical Fighter Wing of Hill Air Force Base and other supersonic jets. The airspace being sought for expansion of supersonic flight and air-to-air combat training overlies western portions of Tooele, Juab and Millard Counties in Utah and eastern portions of Elko and White Pine Counties in Nevada. This completely takes in the Ibapah ranching district, its grazing properties, the Goshute Indian Reservation, and the proposed Deep Creek Mountain wilderness area. Our ranches and other properties in the Ibapah Valley are included in the proposed restricted area along with twenty-five neighboring ranches and atleast twenty additional homes.

POPULATION OF IBAPAH: Within the boundaries of Ibapah we have 200 people living in close proximity and a total of 350 people living within the proposed area. The Draft Environmental Impact Statement (DEIS) fails to recognize that the people of Ibapah live in a closely populated area, not sparsely settled as stated. We need to be recognized and taken into consideration on this proposal as we are the ones who will be adversely affected.

THE SAFETY AND WELFARE: of the people of Ibapah have been of little concern to the military. We are law abiding citizens of these Our United States and we demand consideration. The Air Force has little respect for established boundaries and little concern for Ibapah residents. Low flying jets are hazardous and sonic booms do destroy. Low flying jets means when you can hear the metal clang above the jets roar, see the flash of identification numbers beneath the plane, see the tree tops above the low flying jet, hear the loud roar right above you as you drive your automoblie down the road and you automatically duck or sometimes run out of the road, practically fall off your tractor or horse as they fly directly above you, or fly just above you over the brink of a hill, etc. The fighter pilots seem to use our ranch houses and buildings, the valley residents themselves, and our livestock for experimental runs of realistic gunnery practice and supersonic attacks. Instead of being "shell shocked", we will be "jet shocked" from intensified jet action.

THE NOISE AS WELL AS THE CONCUSSION: of the super sonic booms will annoy area people about 100% rather than the statement of the DEIS that only 12% of the people living in the area would be "highly annoyed." All the Ibapah residents are strongly against this proposal as we have already experienced damaging and explosive sonic booms and frightening roars of unexpected, low flying jets. In the hands of youthful pilots these jets are an instrument of scare and frightening tactics for the purpose of amusement in their behalf because of our startled reactions. With the intensifying of training flights and the predicted 1050 monthly sonic booms from F-16 Fighter wartime tactics, we will be blasted out of existence. If noise from low flying jets and sonic booms are not detrimental, why do babies cringe and cling to their mothers at the sound of a jet? Why do unborn babies quiver and jump within the mother at jet approach? Why do people jump and watch in angered anticipation as they watch for the jets return or the second jet? Why do grazing cattle stampede to the closest fence at the noise of a sonic boom? Human and animals alike become unnerved and can no longer function properly because of the loud, booming concussion of the unexpected sonic boom or the roar of a low flying jet. No, we can never adjust to the noise of the sonic booms or the low flying jets.

PROPERTY DAMAGE: already has been experienced by valley residents with broken windows, cracked walls of homes and buildings including those of the school house, broken and falling tile and plaster, walls crumbling and foundations cracked. With these unstable conditions the value of our properties will drop to nothing. With this airspace expansion the high density of aircraft that will be operating over this populated area puts our lives, our livelihood, and value of our properties in jeopardy.

IN CONCLUSION: we have shown some of the adverse effects this proposed training area would have on all Ibapah residents: the ranchers and their families, the Goshute Indians, our livestock and our homes. Our valley will no longer be a "valley of production" but a "valley of destruction", if this proposal takes effect.

RECOMMENDATION: to have the Air Force review their plan for the restricted training area and withdraw their request for the proposed training area. The military should consider alternatives to the proposed action rather then subject people of the Deep Creek Valley, their properties of the Deep Creek Mountain area, and the bordering Nevada west hills to the devastating effect of air-to-air supersonic combat training by the Hill Air Force Base F-16 fighter planes.

Rae N. Bateman
Phyllis R. Parrish Bateman
Kyle W. Bateman
Ronald V. Bateman

D-483

863 Rosewood Lane
Layton, Utah 84041
Nov 30, 1983

Staff Judge Advocate
OO-ALC/ JA
Hill Air Force Base, Utah 84056

As agreed upon during my conversation with your Secretary on Nov 28, 1983 I am sending you a copy of the written statement presented by the Parrish family of Ibapah, Utah on Nov 29, 1983 at the metting held on this date.

Sincerely,
Charles W. Bean
For the Parrish family.

Subject: Proposed Restricted Airspace For Supersonic Flight Training Along Utah/Nevada Border

Written comments for presentation at public hearing at Tribal Hall, Affiliated Tribes of the Goshute Indian Reservation, Ibapah, Utah 29 Nov 1983.

Submitted by: Parrish Estate, Ibapah, Utah
Blanche L. Parrish Bean
Phyllis R. Parrish Bateman
Joyce C. Parrish Cook

INITIAL STATEMENT:

The Parrish family desires to go on record as being strenuously opposed to the Air Force proposal to increase the restricted airspace for supersonic and subsonic training flights of fighter aircraft (primarily F-16 aircraft) along the Utah/Nevada border.

The Parrish family owns ranches and other property in the Ibapah valley (Deep Creek valley) which runs along the Utah/Nevada border and is included in the proposed restricted area. While we are generally opposed to the whole proposal we will confine our remarks relatively to the Deep Creek valley and the adjacent areas on the east and west side.

POPULATION DENSITY:

The Draft Environmental Impact Statement (DEIS) states the proposed expansion area is sparsely settled with only about 350 people living there. The fact is that over 200 of these people live in the Deep Creek valley which fact the DEIS fails to recognize which we feel is very significant. Also there is a school house in the valley attended by all the children living there. We feel this fact alone should force reconsideration of the proposal.

SAFETY:

The high density of aircraft that will be operating over this concentration of people poses a very significant safety problem. Fighter aircraft do crash (36 F-16 aircraft since 1979) . It is inconceivable how the Air Force can ignore this fact and continue with their present plan which will expose the people and school children in the valley to this unacceptable hazard.

PEOPLE IMPACT:

Another point that should be considered is the statement in the DEIS that only 12% of the people living in the area would be "highly annoyed" by the sonic booms. This is completely in error and unrealistic. In fact this number should be nearly 100%. Our family has conducted an informal survey and determined that all of the people contacted were strongly against the proposal and very concerned with the low flying aircraft and sonic booms.

PREVIOUS AIR FORCE ACTIVITY:

According to published maps the Deep Creek valley is not included in the current training areas yet the Air Force has been using this air space for subsonic and supersonic flights for a number of years in violation of current rules and regulations. As a result, we, and other people living in the valley are very familiar with the impact of training flights and sonic booms. The predicted 38 sonic booms per day or 5 per hour is totally unacceptable. The ones now being experienced are causing enough problems for school children, people and livestock. Subsonic flights at low altitudes are a common occurance. The actions of fighter pilots seem to indicate they are using ranch houses, ranch buildings, people and livestock for practice strafing runs. Experiences of members of the Parrish families can attest to this fact. Objections to these flights have been made to Hill AFB but no action has been taken.

It would appear that the Air Force has little respect for established boundaries and little concern for the inhabitants of the Deep Creek valley. From past experience we believe it is quite evident that if this valley is included in the proposed training area the impact on the valley would be devastating.

PROPERTY DAMAGE:

Property damage has been experienced in the valley and it is certain that if the plan is approved much more can be expected. Our family has made a claim for property damages which has been paid in part.

PROPERTY VALUE:

No one can deny that property values will be significantly reduced if the Air Force plan is approved. Sale of ranch land and grazing land will be very difficult if not impossible unless the asking price is substantially reduced. Why should the land owners in the valley be so penalized? What, if any, recourse do they have?

OTHER CONSIDERATIONS:

The statement in the DEIS there would be no adverse effects on humans and no significant problems for domestic or wild animals is incorrect. One only needs to observe the reaction of grazing cattle to low flying aircraft and to sonic booms to know how wrong this is. Just ask any rancher or his family how they feel when subjected to the conditions of training flights. It should also be noted that the Deep Creek mountains are being considered for a wilderness area.

CONCLUSION:

It is quite evident that to include the Deep Creek valley, the Deep Creek mountains and the Nevada hills to the west in this proposed training area is wrong as it would be very detrimental to the ranchers, their families, the Indians, livestock, wildlife and the wilderness study area of the Deep Creek mountains. In the face of the facts previously stated it is very hard to understand how the Air Force can continue to seriously consider including the Deep Creek valley and adjoining lands in the restricted area for high density fighter aircraft training.

RECOM-ENDATION:

We, therefore, request the Air Force review their plan for the restricted training area , withdraw their request for the proposed traing area and exercise one of their stated options for a more suitable area.

NORTHWEST FARM BUREAU
INSURANCE COMPANY

BOX 297 LUND, NV 89317 TELEPHONE: 238-5295

To: U S Air Force Hearing Ely Nov 30, 1083

From: Phil Carter Lund, Nev.

I would like to protest the extension of the Gandy test range further into White Pine Co. for the following reasons.

It could make a more circutious route for our comercial air line between Ely and Salt Lake City, and may have detrimental effect on air transportation in and out of White Pine Co.

Extending the range would also have a detrimental impact on many years of prior ranching air travel in and out of Spring Valley.

I also feel that the extension of the range, and the resulting added sonic booms could have an impact, on the people, livestock, and buildings in the proposed enlarged area.

I would urge the Air Force to consider alternatives to the enlargement of the Test Range.

Thank you holding this hearing in our County and giving us the opportunity to express our concerns.

Phil Carter

STATEMENT OF BRENT ELDRIDGE AT ELY, NEVADA, CONCERNING SUPERSONIC TESTING DEIS FOR THE GANDY RANGE EXTENSION MOA, NOVEMBER 30, 1985.

I am Brent Eldridge, one of four brothers who, with our dad, mother, grandmother, and our wives and children, operate a cattle ranch beneath the southern ellipse depicted in the DEIS. I speak today for that family.

This DEIS has one major flaw, which is evident throughout; it nearly ignores the proposed actions' negative impacts upon the human environment, while expounding incessantly on the need for the training area expansion. I won't argue with your statements of need for adequate training areas, but I take exception to chosen alternatives which are driven by inadequate environmental analysis. Before getting into the errors I see in this document, I'd first like to draw some comparisons.

The present supersonic test areas and the proposed, when combined, would total approximately 6400 square miles; with the adjoining subsonic training areas also thrown in, the whole training area would total over 16000 square miles, for the use of one AFB. I note that the nation of El Salvador is 1/2 that size, the Falkland Islands 1/4, Israel 1/2, Lebanon 1/4, Kuwait 1/4, and Nationalist China 7/8. If, indeed, 16000 square miles is a minimum size for the adequate training of American pilots, I respectfully submit that we must choose carefully where we have a war; in many of the smaller countries there just isn't room.

Since the DEIS addresses subsonic flight effects somewhat, I'll state for the record that we've seldom been offended by low-flying fighters over the last 20 years; in fact, we usually enjoy them. We support a strong defense, a military force that can stab, shoot, burn, strafe, and bomb with the best of them. But, as you might surmise, we also strongly believe in our way of life and in the values embraced by all the people of rural Nevada and Utah. We live here for definite reasons, and those reasons are now in jeopardy.

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At 1.2.1, reference is made to a faulty EIS finalized in November, 1977 in which the needs and impacts of the 388th TFW and others were underestimated. I understand that the same-type mistakes in other bed-down EIS's for other locations are also now the justification for similar-type expansions of training areas there. I feel that, indeed, once might have been an honest error, but twice would indicate to me a design to incrementally gut the western deserts. The people of Utah and Nevada may have offered different comment in 1977 had they been advised of the real impacts resulting from

bed-down at Hill; this DEIS seems only an effort to legalize what may have been in 1977, and may still be, a violation of NEPA regulations.

In the summary you state that people beneath the area live at or below 5000 feet MSL. Such is not the case. Almost all the inhabitants here live at or above 5500 feet MSL.

Also in the summary you note that the expected levels of overpressures are not known to cause any health hazards. You haven't said, however, whether they are known to not cause any health hazards. You should address the long-term effects resulting from loud, intermittent noise. Average noise levels in a city have little similarity to the proposed action; I recall the recent item on TV news which described the reaction brought about by an evening flight of the ZR 71 Blackbird over SLC. I continue to believe, until it's proven to me otherwise, that after living several years at 5000 feet beneath your "nominal" sonic impact the 350 people here won't be worth protecting.

Following are errors or misleading statements made in the DEIS which indicate the overall inadequacy of the document: 3.1.2--Deep Creek Valley may be better watered than most valleys in Nevada, but it is definitely not better-watered than at least one other valley in the proposed test area. 3.1.3--An attempt is made here to depict the test area as an almost-barren desert, and that's very incorrect. Antelope, Deep Cr., Spring, and Snake Valleys are some of the best livestock winter range in the Intermountain West. I know of no instance where the "scattered grasses" are not suitable for grazing. 3.1.5.2--Agriculture is, indeed, an important land use in the area, contrary to your supposition. Native meadows and/or cultivated crops here are essentials to almost every livestock operation affected by this proposal. 3.1.5.3--An inferrence that mining will never be of any greater importance in the area than it is now is misleading. Sure, mining operations are now isolated and small in scale, but that's true of any area before a decision is made to mine some new-found deposit on a large scale. The number of mining claims in the area attest to its mineral character. 4.1.2.1, 4.1.2.2, and 4.1.2.2.1--You note that noise created by subsonic flight is insignificant--I agree. You could have said also that noise created by nearby supersonic flight is <u>damned</u> significant, and I would haveagain agreed. But you didn't, and I think you should. You mentioned the annoyance factor, and then moderated <u>that</u>. Ladies and Gentlemen, the annoyance, the startle reaction inherent in all live critters, is the issue. Either address its effects, or demonstrate that, because of lacking or inconclusive evidence, it can't be

addressed.

I prefer that, prior to any implementation of, or further advancement toward, your proposal, you prove to the people of Eastern Nevada and Western Utah what really may be in store for us. I doesn't seem unreasonable to ask you send your F-16's here for a few passes down each valley west of the existing supersonic test area at Mach 2--2.4 and 5000 feet AGL. We'll then really know what the one-time impact really is. I suggest Mach 2.4 because that's what the aircraft is capable of; if it's capable, we'll experience it. As you say in the DEIS, pilots shouldn't have to constantly monitor the airspeed indicator.

Thank you for this opportunity to comment.

November 30, 1983

Department of the Air Force
Headquarters 2849th Air Base Group (AFLC)
Hill Air Force Base, Utah 84056

For inclusion in the Gandy Range Extension DEIS

Dear sir:

On several occasions the Air Force and the Navy have insinuated that the authority to conduct their activities in our airspace resides is them, and that after satisfying the requirements of the National Environmental Protection Act, they may operate in any manner which they deem appropriate, regardless of the consequences to any individual. But this is misleading.

The sole responsibility for controlling the use of our airspace is invested in the Administrator of the Federal Aviation Agency, who is appointed by the President, and who operates under the directives and confines of the Federal Aviation Act.

The Administrator alone may designate certain airspace as restricted in order to confine hazardous activities and to protect non-participants---or he may revoke that designation; he may assign, or revoke, civilian and military joint-use airspace and military training routes; he may issue, or suspend, waivers of the rules which regulate airspeeds; he may confer with the Department of Defense, or any other governmental agency, about the desirability of taking these actions.

What he cannot do is abrogate, or ignore, the directives of the Federal Aviation Act, one of which clearly states that "When an aircraft activity conducted in special use airspace could affect the safety of persons or property on the surface, provisions shall be made for their protection."

The Navy in central Nevada, and the Air Force in Nevada, Utah, New Mexico and Texas are now proposing just such an activity. Their stated justification for these trespasses is the need to prepare a national defense; and each proposal is enforced with the written statement that there is no acceptable alternative; and with the oral extortionary threat that they will remove themselves, and their economic support, if the community frustraces their plans.

In recent years the military organization has become so influential that there are some who view it as a fourth branch of government and not merely as an agency of the Department of Defense; and there are others who seem to feel that we can preserve our form of government by ignoring its laws. The Administrator of the Federal Aviation Agency needs to be reminded of his responsibilities.

Our elected representatives should make every effort to assure that the various military units cooperate with each other, and coordinate their activities in such a way as to produce the least environmental damage, keeping in mind that the inhabitants of our sparsely populated areas also make substantial contributions to our national strength, and character, and are entitled to the same considerations as those who live in more populated areas.

And, in the final analysis, if it is determined that there is no possible alternative to destroying our habitat, in order to provide a national defense, then our elected representatives should come to us and explain, in convincing terms, why this must be so and what provisions will be made to compensate individuals for property destruction and devaluation and for the disruption in their lives.

Sincerely,

Dick Holmes

Dick Holmes, chairman
Concerned Rural Nevadans
Box 629, Fallon, Nevada 89406

copies to:

Congresswoman Vucanovich
Senator Laxalt
Senator Hecht
Governor Bryan
Attorney General McKay
Citizen Alert

WHITE PINE SPORTSMEN
Nevada Wildlife Federation - Member
P. O. BOX 1187
ELY, NEVADA

November 29, 1983

Environmental Planning
HQ AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Dear Sir:

The New White Pine Sportsmen's Club is a White Pine County organization with thirty five members in Ely and McGill, Nevada.

We have carefully reviewed the DEIS for the "Establishment of the Gandy Range Extension". We are strongly opposed to this proposal. We are not opposed to alternatives b., c., or d., as stated on page ii.

Our concerns are primarily in two areas of predicted problems. First is our strong concern on the potential detrimental effect on all wildlife and feral horses. Page V states that "Questions on long term protracted exposure and sublevel responses remain to be studied"(for wildlife). The Nevada ground areas involved are substantially used for the hunting of mule deer and antelope. Mule deer hunting takes place in foothills and mountains. Antelope hunting takes place on the valley floors. It is our experience that these two big game animal species are extremely difficult to approach after a sonic boom. There is no question that the Gandy Range Extension will have a detrimental effect on big game hunting in the area. The sonic boom effect on small game and non-consumptive wildlife is also believed to be detrimental.

The second area of strong concern is the undesirable impact of sonic booms on persons using the Gandy Range Extension area for recreation. Subject land is regularly used in spring, summer, and fall for primitive backcountry recreation and the sonic booms will impair this experience. While subject U.S. Government BLM land is managed for multiple use, it's our strong position that the proposed Gandy Range Extension would impose an undesirable environmental effect on all species of wildlife and on the recreational users of this land.

Bob Marcum
Bob Marcum, President

Robert C. Hollinger
Bob Hollinger, Secretary

D-494

THE STATE OF NEVADA
EXECUTIVE CHAMBER
Carson City, Nevada 89710

RICHARD H. BRYAN
Governor

TELEPHONE
(702) 885-5670

STATE OF NEVADA'S COMMENTS ON HILL AFB/GANDY RANGE DEIS

Members of the Air Force, ladies and gentlemen . . . my name is Linda Ryan. I am director of the State agency designated through Presidential Executive Order 12372 to review the impact of Federal Activities in Nevada, and I am here today to speak on behalf of Governor Richard Bryan.

On October 13, 1983, Governor Bryan forwarded Nevada's official comment on the proposed action for supersonic flight training being requested within the Gandy Range by the United States Air Force. This official comment clearly expressed Nevada's opposition to the proposed action. The Governor's opposition is based on the following four issues:

1. The anticipation of 125 sonic booms per day (30% of which will reach the ground) is an estimate. No specific remedy is offered should the sonic booms which reach the ground, regardless of the number, sustain an impact severe enough in magnitude to detract from the area's quality of life.
2. Since nearly 40% of Nevada's airspace is NOW under federal agency control, any additional airspace restrictions, or restrictive reclassification, will negatively impact on private and commercial aviation in Nevada.

3. Federal agencies are acting independently in their planning efforts toward proposed changes and ultimate reclassification of our State's remaining free airspace.

4. The Draft Environmental Impact Statement describing the proposed actions in the Gandy Range does not - I repeat DOES NOT - address in any substantive manner the statewide airspace impacts on private and commercial aviation in Nevada.

Those issues constitute Nevada's basis for opposing the Gandy proposal, and now we would like to submit additional information on each of the four concerns:

First, in relation to the issue of sonic booms, the quality of life for people living in the area must be given appropriate consideration. The Draft Environmental Impact Statement speaks to this issue in terms of estimates in the number of sonic booms with no provision for public recourse should those estimates prove to be understated. It is not reasonable to expect residents of Nevada to accept the burden of this proposal without having prior knowledge of a daily maximum on the number of sonic disturbances, the severity of those disturbances and a process for remedies should the disturbances prove to be detrimental.

Next is the issue of the self-imposed restrictions by private and commercial aviators in their use of Military Operations Areas (MOA's) which are reclassified for supersonic flight training. It should be remembered that the Federal Aviation Administration (FAA) designates MOA's to enhance airspace safety for all users; that is, the MOA defines specific airspace for military use while

still allowing safe access (under Visual Flight Rules) to private and commercial aviators. However, comments submitted to the Air Force by the Aircraft Owners and Pilots Association documented in the DEIS for the Gandy Range proposal strongly point to the fact that the "see-and-avoid" concept of collision prevention is not an effective method for aircraft operating at supersonic speeds. Thus, it is our contention that when the Department of Defense reclassifies an MOA for supersonic flight training, it is in effect and for all practical purposes, restricting that airspace. We are aware that the space will not be officially restricted as the FAA does not regulate supersonic flight activity within MOA's. This point, however, is academic since most commercial and private aircraft will not use those areas.

The third area of concern is that this proposed action will intensify airspace use in the areas surrounding the Gandy Range. The Department of Defense and the FAA must consider the use of surrounding airspace in any reclassification effort. We need reliable data on the use of airways surrounding Nevada MOA's in order to evaluate the impact of designating space for supersonic training. This environmental review should consider the potential increases in the military use of the airways outside of existing MOA's and the relative impact on remaining free airspace.

And finally, the Governor's major concern is with the historic trend toward the blocking of large portions of Nevada's airspace and the cumulative impact on the remaining airway corridors within Nevada. Experience indicates an increasing airway corridor encroachment through the expansion of one or more of the five existing major MOA's in Nevada. The reality of this encroachment on Nevada's free airspace is evidenced in the

recently extended Desert MOA in Southern Nevada by approximately twenty nautical miles to the north as initiated by the U.S. Air Force at Nellis Air Force Base. This reality is further intensified by the pending action of the Department of Navy's proposal to designate over 5,600 square miles for supersonic flight training within the Gabbs and Austin MOA's. These actions, and the knowledge that airspace currently designated for military use in Nevada is surrounded by low-level, military training routes and military air-to-air refueling routes bring us to the critical issue of the resulting impact on private and commercial aviation.

If we had an accurate map of all MOA's, restricted areas, low-level military training routes and military refueling routes in Nevada, it would be evident that private and commercial aviation are clearly threatened. The U.S. Air Force, the Department of Navy and other federal agencies proposing to limit use of airspace in Nevada have a clear duty to evaluate all aspects of military use statewide. All of us appreciate and wish to accommodate the needs of the U.S. Air Force. However, it is time for the Air Force to deal with us in terms of statewide airspace use. Addressing this issue on a limited "one-bite-at-a-time" basis is resulting in severe, adverse impacts on private and commercial aviation in a growing and tourist-dependent state. Even though Nevada is the 43rd state in terms of population, with less than one million residents, we have within our borders the 29th busiest commercial airport in the world.

Nevada's potential for urban and rural growth in relation to aviation access between our communities and adjoining states must

be considered in any review process. Therefore, it is our contention that the Environmental Review Process employed by the Air Force is inadequate to justify this proposed action.

WHITE PINE COUNTY
INDUSTRIAL PARK REVIEW BOARD
P.O. Box 630
Ely, Nevada 89301

November 30, 1983

Environmental Planning Office
HQs. AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Gentlemen:

The White Pine County Industrial Park Review Board has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Gandy Range extension and adjacent restricted airspace as an area for supersonic flight training.

The Board feels that the DEIS does not adequately address the economic impacts the extension could have on White Pine County. Additional analysis on the effects on civilian flights and the economic impacts on the county is needed.

Airspace to the south, east, and west of White Pine County is already restricted for military uses. Extension of the range and increasing the volume of military flights will decrease available airspace for civilian flights. This reduction of flights through the Gandy Range will make it more difficult for air traffic, both passenger and freight, to fly to White Pine County on east/west routes.

The Industrial Park Review Board feels that the proposed Gandy Range extension and restricted airspace for supersonic flight has the potential to adversely affect White Pine County's economic development efforts. Given the information available in the DEIS, the Board opposes the proposed extension.

Sincerely,

ART M. OLSON
Chairman

AMO/jas

Dear Sir(s):

Because of the state of my health at this time, I request this to be read during my five minute block of time.

I feel that before Nevadans consider allowing the Air Force to use Nevada airspace they should consider how the Air Force has dealt with Nevadans in the past.

I now reside in Eureka, Nevada but used to reside on a ranch about twenty miles east of Eureka. This ranch is located in White Pine County. I was forced to leave my ranch because the water system was poisened, our animals died, our health deteriorated, the ranch was condemned and doctors told us to move out. I am convinced blasting conducted by the military for MX purposes had a direct effect on the ground water my wells pump from.

The reason we believe this to be true is because our water system worked very well for four years but shortly after the blasting our water system became contaminated.

We have had our water tested various times with conflicting results but everyone does agree the water is contaminated.

The members of my family and I have gone to various physicians who all seem to relate our health problem to overburden of heavy minerals.

BlM reports stated all holes that were blasted were all later filled in so that no water from above ground could seap in. A Sheriff's report, and photographs in my possession, show this to be totally untrue.

Before blasting, we were all assured no blasting would be conducted any closer than five miles from all private property. In fact, the blasting occured within 1/4 of a mile from our private property.

I believe before we allow the United States Air Force, or any other government related group to enter Nevada in any way we should recieve more than empty promises and untruths concerning their functions in our state. I also believe these people should be held liable and take responsability for the damages to property and life they inflict.

Sincerely,

John Kenneth Shanahan
P.O. Box 153
Eureka, Nv. 89316

White Pine
Chamber of Commerce

Phone: (702) 289-8877

Box 239
Ely, Nevada
89301

November 30, 1983

Environmental Planning
Hqtrs. AFLC/DEPV
Wright-Patterson AFB, Ohio 45433

Gentlemen:

The White Pine Chamber of Commerce Tourism Committee would like to express its concerns over the proposed Gandy Range Extension and adjacent restricted airspace as an area for supersonic flight training.

The Tourism Committee is working to promote White Pine County for increased tourist trade. The committee recognizes that our area has a great deal of potential for tourism through its scenic beauty, historic sites, and recreational opportunities. Increased tourist trade can have a substantial, positive impact on our area's economy. The proposed extension of the supersonic training site may be very detrimental to our efforts in three ways:

1. The increase in military flights over the area decreases the potential for civilian flights through the restricted air space, making it more difficult for travelers to fly into our area on east/west flights.

2. One of the county's assets for increased outdoor recreational use is its millions of square miles of back country areas. The increase in sonic booms will reduce the appeal of the Spring Valley, Mt. Wheeler and Mt. Moriah areas on the east side of the county for outdoor recreational use.

3. The county attracts hundreds of visitors to hunt and fish each year. The negative effects of the increased sonic booms on our area's wildlife are not known and have not been fully explored.

White Pine County suffers from high unemployment and unstable economic conditions. Increasing tourist trade in the area is one way to generate jobs and income for the county's residents. The extension of the Gandy Range and adjacent restricted airspace for supersonic flight training will not provide any direct or indirect economic benefit for our area. Our Tourism Committee feels that we should not be asked to suffer the potential losses to our economy that could result from the proposed action. The Committee feels the Draft Environmental Impact Statement has not adequately addressed the economic impacts on White Pine County and we are opposed to extension of the supersonic training site.

Sincerely,

Joy Bybee

Joy Bybee, Chairman
Tourism Committee

JB/jas

WHITE PINE COUNTY
STATEMENT ON DEIS
SUPERSONIC TESTING IN
GANDY MOA
NOVEMBER 30, 1983
J. KENDALL JONES, M.D.
VICE CHAIRMAN
BOARD OF COUNTY COMMISSIONERS

White Pine County government is very concerned about your proposal to train supersonically over its land and its citizens, and doesn't believe you've told us what the true consequences of your action will be.

We have in White Pine County all the values and uses you mentioned in the DEIS, and more. Many of our commercial and recreational uses you've down-played while citing studies which show average city noise levels having little or no effect on these activities. We don't see any correlation whatsoever between ambient noise levels in the cities and the sonic booms which could ricochet around out there in the quiet of eastern White Pine County. At stake is the commercial and recreational use of that land.

I call to your attention the efforts of the Bristlecone Film Committee, which has been in existence for about a year. Its primary goal is attracting the filming industry to our area. Several commercials have been shot here, and several companies are serious about doing larger productions. As you could well imagine, no producer will spend money on a secluded site which is inundated with sonic booms. The proposed action will, indeed, adversely affect the economy of our county directly.

There may be only 350 residents living directly beneath the test area, but there are thousands more who use the area because of the character of the environment. The reasons for using the area the way we do are many-fold: of importance equal to just daily success of hunters, trappers, prospectors, rockhounds, and casual recreationists, is the experience in a non-urban setting. Those qualities in our environment would be lost, contrary to your analysis; we say this because we believe only we fully understand our attachment to, and enjoyment of, the values here.

Presently, about 95% of the land in White Pine County is controlled by federal government. Our tax base is small, has been largely dependent upon the mining industry throughout our history, and, if yo implement this proposal, the effects will further reduce that base by litterally running the scattered inhabitants off their mineral and agricultural land. We don't like that.

Air traffic is essential to the diversification of our economy, and there is a definite adverse impact upon non-military traffic within an MOA when going from subsonic to supersonic, as it relates to safety. General aviation and our air carrier will choose to not fly through that large expanse of airspace after being rendered completely unsafe. We doubt that the transient or cross-country pilot will be

given the access and clearances, as promised to locals, through the area when it's "hot". Because of the extra distances involved in avoiding the new "super MOA", we are made even even more remote.

We suggest that you correct the DEIS to accurately portray the impacts from such an action as you propose. If you presently are forbidden access to the lower elevations for realistic demonstration of speeds of up to 2.4 Mach, then we suggest that adequate data doesn't exist by which any of the impacts may be properly addressed. We don't believe that our people can bear the psychological effects of such activity, and urge your recognition of that in the DEIS.

We appreciate your coming to Ely for this hearing.

APPENDIX E

RESPONSE TO COMMENTS

1. The Air Force appreciates the concern expressed over population figures and, based upon the comments received and observations of pilots frequently overflying the area, we have revised the estimate of population distribution. Comment noted and revisions made to FEIS.

2. Reference 4.2.9 of FEIS - The Air Force appreciates the concerns expressed about the increased risk of mid-air collisions and impacts on the civilian population in the area. This concern fostered the initiation of the Military Operating Area (MOA) concept. As discussed in the FEIS, the probability of a mid-air collision with civilian aircraft is very low. Similarly, we recognize that resident anxiety towards aircraft accidents may be increased. To reduce anxiety and impacts on the civilian community, the Air Force is considering a reduced scope proposal as a primary alternative.

3. The 5,000 foot AGL floor is proposed for supersonic aircraft operations only. The Gandy MOA is now identified as an operation area for subsonic military aircraft down to 100 feet AGL. However, Air Force regulations do not allow harrassment of ground parties and any pilots found guilty of such activities are dealt with severely. A timely notification to the Air Force would definitely help identify pilots responsible (within one day if reporting by telephone). A written or verbal notification to one of the following offices would be appropriate:

Public Affairs Office
OO-ALC/PA
Hill AFB, UT 84056
(801) 777-5201
(Off Duty: (801) 777-3007)

299 Range Control Squadron
299 RSC/CC
Hill AFB, UT 84056
(801) 521-7070

4. Your comment has been noted. The concerns and opinions expressed have been considered in the evaluation of this proposal.

5. Notices announcing the public hearings were first released on 10 November 1983. The Air Force first published its intent to prepare a Draft EIS in August 1980 and released the DEIS to the public on 19 August 1983. The DEIS was released to news media and copies were provided to State and Federal agencies and anyone expressing an interest as a result of the 1980 notification. The public hearing notification was again released to the news media and individual notices were mailed to everyone that had expressed a concern about the DEIS or the proposal. The public comment period on the DEIS was originally scheduled to close 14 October 1983. This comment period was subsequently extended to 16 December 1983 to accommodate the public hearings.

6. The Air Force appreciates the concern expressed by many commentors. Based on the collective knowledge and consensus of the scientific community, the Air Force believes the level of overpressures to be experienced at intermittent intervals are neither sufficiently intense nor frequent enough to be considered a significant impact from a health standpoint. Reference 4.2.1 of the FEIS.

7. Reference 4.12.3 of FEIS. Comment noted.

8. Comment noted. Other alternatives are evaluated in Section 2.2 of the FEIS.

9. The proposed action to designate a portion of the Gandy MOA as airspace for supersonic flight training will not change its designation as a MOA. The joint use policy now existing in this airspace will not be impacted by this proposal. Also, supersonic flight is proposed only for elevations above 5,000 feet AGL and it should be noted that 90 to 95 percent of the supersonic flying will be above 10,000 feet AGL.

10. The airspace above the community of Baker, Nevada, is not controlled by the military nor is it designated as an area for military operations. However, the Lucin MOA does begin approximately seven miles to the east. Outside of MOAs and restricted airspace, military aircraft must adhere to established Air Force regulations which are coordinated with FAA. They are required to travel at air speeds of 250 knots or less whenever they are below an elevation of 10,000 MSL unless they are flying under a waiver or otherwise designated route.

11. This comment is not applicable to this EIS. There was no Revised DEIS proposed for the "Establishment of the Gandy Range Extension and Adjacent Restricted Airspace as an Area for Supersonic Flight Training."

12. The initial notice of intent was filed in August 1980 and was prepared to meet the CEQ guidelines. The Air Force has elected to continue processing the Draft EIS under the guidelines rather than the 40 CFR 1500 regulation. While there were minor differences in the format and technical requirements. The Final EIS is prepared in accordance with CEQ regulations and does an adequate job of evaluating environmental effects of the proposed action and alternatives and does provide the decision-maker a basis for a sound, reasoned choice. A list of preparers is provided in this document.

13. This comment is not applicable to the proposal addressed in this document. The airspace being proposed for supersonic flight has not been designated for that usage in the past.

14. The term "set aside" does not mean to literally restrict or segregate. It means to identify, list, or approve the area for supersonic flight.

15. The Air Force is not aware of any definition for a MOA that provides a legal basis for stating the operations conducted therein are ultra hazardous. MOAs are established under criteria provided in FAA Handbook 7610.4, "Special Military Operations", and FAA Handbook 7400.2, "Procedures for Handling Airspace Matters." The proposed action meets the criteria identified in these handbooks. Additionally, the F-16 has on-board radar that further enhances the area control provided by FAA.

16. Comment noted. This comment focuses on the general policy of supersonic flight and it is emphasized that the Air Force has not proposed changing that policy. The only similarity among the supersonic proposals is timing. The proposals should not be considered as cumulative or even connected actions where one affects, or is interrelated or dependent upon, another. Thus, there is no basis for preparing a programmatic EIS.

17. The Air Force did provide environmental analysis based on overpressures rather than Mach number and altitude. Consequently, overpressure data does include the Mach 1.3 supersonic event. From a statistical standpoint, both methods show comparable values; however, overpressure analysis provides a straightforward approach to answering questions on a number of events one would expect to hear, and percent of booms expected above a given value.

18. The comment indicates that complaints were used to derive percent "annoyed" is not true. Three rounds of social surveys which included urban, suburban, and rural subgroups were used to obtain dose-response data. Extrapolated data from the study can be applied with confidence. Due to the subjective nature of individual responses to noise, active campaigns against a proposed flight program will frequently generate multiple anticipatory complaints far in excess of those occuring during the actual program.

Conclusive evidence does not exist to show that noise at the proposed levels adversely affects the health of people. A direct cause and effect relationship has not been demonstrated between noise exposure and adverse health effect in any study using human subjects. Worthington's statements should be compared to those of Thompson. Dr. Shirley Thompson of the University of South Carolina School of Public Health summarized her research team's "evaluation of the epidemiologic evidence available regarding the effects of noise on the cardiovascular system" in a paper given at the May 1983 meeting of the Acoustical Society of America. (A summary of EPA reports having NTIS designations PB 82-147752, PB 82-147760, and PB 82-147778.) Of some 800 potential publications, 83 were chosen for critical review. Each selected article was critiqued independently by an epidemiologist, a cardiologist, and an audiologist. Individual critiques were then integrated for study summary. The conclusion derived by the reviewers, plus an additional set of consultants, was: "Our analysis indicated that studies to date are inadequate for establishing cause-effect relationships between noise and cardiovascular disease. Recommendations made were aimed at improving study designs for future research." In terms of adequacy of current research Thomoson summarizes the results of the evaluation process as follows:

> "The relatively poor quality of the identified papers is reflected in the individual component and overall ratings of the reviewers -- the proportions of studies meeting more than 50 percent of the evaluative criteria were as follows: On the noise component, 6% of the English studies and 11% of the translated research; on the health outcome component, 33% of the English and 32% of the translated research; and on the epidemiologic methodology component, 42% of the English literature and 11% of the translated studies. When the lowest of the three component scores is taken as the

overall validity score, no study reported in the English literature and only one in the translated literature was rated higher than "4" on the 0-9 scale. These ratings indicate that the literature is less than full informative for the task of judging the association between noise and cardiovascular effects."

These reports by Thompson represent a milestone in noise research and hopefully a precedence has been set for future evaluations of research in this area. The bulk of the available scientific evidence suggests that noise levels that would yield "hypertension, ulcers or pregnancy problems" are considerably in excess of those that will characterize the Gandy MOA.

19. The French "Jericho" test data, along with consultation with the United States' representative to that test, provide a significant basis for the analysis provided. What appears to be at variance is an understanding of the focus phenomenon in respect to cutoff Mach number.

20. Comment noted. There are many people, as well as international experts, who sometimes make uncritical comments about the effects of noise. This is one case where group opinion is probably better than individual opinion. A group is more likely to consider all aspects of a decision. The EPA and HUD statements and criterion represent the opinion of groups.

21. Colonel Smith's personal comment addressed his recognition of the issue to protect one's backyard from a nonparochial requirement (regardless of the level of impact). He pointed to the fact that some people express concern over the endangered peregrine falcon in Reserve, but no such concern is mentioned when it's suggested to double the impacts in the Valentine MOA, which also has a peregrine falcon. (The same point could be made about the many other attributes that are common to the two areas.) It was this point that Colonel Smith was expressing.

22. This comment is not directly applicable to this DEIS. Reference 1.2 of this document for discussion of training requirements. However, we did underestimate training requirements at Hill AFB also.

23. The Air Force does not propose to train at the upper end of the flight envelope in the Gandy Range area. Functional flights at higher Machs can and are performed over totally desolate range areas. Projected operations for the Gandy MOA requires external fuel tanks which would have to be dropped during flight in order to achieve the higher flight speeds. This does not degrade the value of distant training areas; pilots must develop conservation habit patterns while employing the aircraft to its optimum configured capability. Although the average supersonic flight speed would be about Mach 1.1, it will range between 1.0 and 1.3+ Mach.

24. Reference 4.1 of the FEIS.

25. The comment grossly overstates the potential impact. The probability, under a most conservative estimate, is still no greater than 0.003 that anyone will get focus booms.

26. This is precisely why CSEL is used to assess human response instead of peak overpressure.

27. Comment noted. While the data is not perfectly Gaussian, it does allow for a very conservative statistical analysis. This assumption overstates the case since the true distribution is skewed to lower values.

28. We concur with the first paragraph and wish to clarify the points made in the second paragraph. Turbulance always decreases boom magnitude, not increasing magnitude due to focusing. Of course, rise time and peak impulse are highly significant, hence CSEL. A "focused boom is a focused boom" only as much as a stable, uniform atmosphere permits it to be.

29. If the focus is at a high altitude, it can have no effect on people on the ground.

30. No exception is taken to the "quote"; it does not say the focus always reaches the ground.

31. Uncritical statements are made repeatedly that people do not adapt to noise or that the startle response has been proven not to abate after repeated exposure. Such statements are meaningless without stating the parameters existing in the noise environment in which the supposed adaption or lack of adaption occurs. The situation is complicated and some parameters are incompletely understood, however, there are occasions where some adaptation does occur. Whether adaptation occurs or not is related to the intensity and frequency content of the noise, the level of the background in this area and hopefully, in the future one can specify in analytical detail those situations where we would and would not expect adaptation. Also adaptation can occur along many dimensions - behavioral, physiological, and psychological and we must be able to specify how adaptation occurs along each dimension.

32. Conclusive evidence does not exist to show that noise at the proposed levels adversely affects the health of people. A direct cause and effect relationship has not been demonstrated between noise exposure and adverse health effect in any study using human subjects. Worthington's statements should be compared to those of Thompson. Dr. Shirley Thompson of the University of South Carolina School of Public Health summarized her research team's "evaluation of the epidemiologic evidence available regarding the effects of noise on the cardiovascular system" in a paper given at the May 1983 meeting of the Acoustical Society of America. (A summary of EPA reports having NTIS designations PB 82-147752, PB 82-147760, and PB 82-147778.) Of some 800 potential publications, 83 were chosen for critical review. Each selected article was critiqued independently by an epidemiologist, a cardiologist, and an audiologist. Individual critiques were then integrated for study summary. The conclusion derived by the reviewers, plus an additional set of consultants, was: "Our analysis indicated that studies to date are inadequate for establishing cause-effect relationships between noise and cardiovascular disease. Recommendations made were aimed at improving study designs for future research." In terms of adequacy of current research Thompson summarizes the results of the evaluation process as follows:

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These reports by Thompson represent a milestone in noise research and hopefully a precedence has been set for future evaluations of research in this area. The bulk of the available scientific evidence suggests that noise levels that could yield "hypertension, ulcers or pregnancy problems" are considerably in excess of those that will characterize the Gandy MOA.

33. Reference 4.4 of the FEIS. Also see section 4.6.1.5 of the FEIS.

34. The Air Force appreciates the concern expressed, but believes these alternatives have been adequately reviewed. Also see section 2.2 of the FEIS.

35. Reference 2.2. of the FEIS. Comment noted.

36. We are unable to determine which studies the commentor is referring to. However, the National Academy of Science published a report in 1982 on Prenatal Effect of Exposures to High Level Noise, which was prepared by the Biomechanics Assembly of Behavioral and Social Sciences. The study evaluated the hazard of prenatal noise exposure and reports. There is no conclusive evidence of detrimental effects of high-intensity external sound in higher mammals. The noise levels to be generated within the Gandy Range are not expected to be detrimental to the hearing of small children, either.

37. See responses 6, 32, and 36.

Although available literature concerning the effects of sonic booms on animals is somewhat limited, information to date indicates that animals are unaffected under most circumstances.

Wildlife including horses, burros, peregrine falcons and other birds, do respond to sonic boom stimuli. Responses generally range from a momentary pause or change of behavioral activity to a startle reaction followed by flight. The noise is usually sudden and of short duration. While there are responses to sonic boom stimuli, a response should not be considered synonymous with an adverse impact. The Air Force, for example, undertook a noise impact study of eight species of birds, including the endangered peregrine falcons. There was no evidence that site abandonment or reproductive failure was caused by jet noise or sonic booms.

In a 1973 report by Federal Aviation Administration entitled, "Studies of the Effects of Sonic Booms on Birds" (report No. FAA-RD-73-148), a variety of birds were exposed to sonic booms and simulated boom overpressures to discover

if booms affected their reproductin adversely. Results of those tests showed the overpressures had no effect on hatching success, growth rates, or mortality.

Observations reported by the US Fish and Wildlife Service of responses of bighorn sheep on the Luke Air Force Range, Arizona, to sonic booms indicate minimal disturbances of the sheep. Since 1955 desert bighorn sheep on the Nellis Air Force Range, Nevada, also have been exposed to sonic booms. During this period, there has been no significant change in the sheep population's age structure, longevity or reproductive success.

Currently, antelope, deer and other wildlife (including desert fox) utilize land adjacent to static test stands. These stands test solid propellant rocket motors and subject wildlife to high noise levels from rocket motor testing and low flying subsonic aircraft with no adverse affects. Also, the State of Utah performs wildlife counts on the Utah Test and Training Range (UTTR) annually. The antelope population has actually increased in the UTTR area resulting in additional hunting areas on lands adjacent to the range.

38. Reference 4.6.1.11 of the FEIS and see response 2.

39. The above comments suggest that the "cummulative" effect of this proposal upon all other proposals should be addressed or that a "programmatic" study be made of all MOAs prior to implementation of this proposal. It should be noted that the Gandy Military Operation Area (MOA) was so established and designated by the FAA in 1976 and is not part of any proposals to designate additional MOAs. The MOA has been used for military operations for several years. The only impacts associated with this proposal are those resulting from the propagation of sonic booms. Neither the nature of the aircraft activities nor the size of the area will be changed. The only change is a slight increase in maximum airspeed which will give rise to sonic booms; therefore, the primary impact addressed by this document is the impact of sonic booms upon the immediate area of the Gandy MOA. This impact has no significant effect, cummulative or otherwise, outside the designated area. In short, this MOA has existed for several years and the aircraft activities therein are not the subject of this proposal -- only the increase in airspeed which will have environmental impact.

40. As required in 40 CFR 1502.22, National Environmental Policy Act, the Air Force has attempted to present and evaluate a worst case condition in the EIS. The worst case is created when special exercises such as "red flag exercises" are scheduled for UTTR airspace. The worst case analysis presented takes into consideration future plans and activities anticipated for the UTTR. Also, it is very unlikely that a significantly larger number of supersonic aircraft would ever be stationed at Hill AFB. The number of aircraft operations now occurring at Hill make it one of the busiest single runway airports in the world.

41. Both parts of your fist point are correct. As to your second comment, the equipment making up the HUS Arena described in Section 1.1.1 has already been installed and is now being tested by the contractor that installed

it. The system should be turned over to the Government sometime during the summer, 1985. As further described in Section 1.1.1, the location of the HUS Arena was picked to make best use of existing HAMOTS sites and airspace already approved for supersonic flight training. Thus, the primary controlling factors for choosing the location of the HUS Arena were independent of the proposal addressed in this EIS.

42. The Air Force does not currently foresee any future requirements which would change the current proposal for supersonic flight above 5,000 feet AGL. A floor of 5,000 feet AGL is used for air-to-air training whether or not that training is accomplished in airspace approved for supersonic flight. However, mission and training requirements do frequently change, therefore, no assurances (guarantees) can be made. Of course, any modifications in operation which may have a significant environmental effect will be assessed prior to a decision to initiate that action. Procedures are currently available to insure that the 5,000 foot AGL limit is maintained.

43. The FAA action which realigned restricted airspace within the UTTR is a totally separate and distinct proposal. Air Force sees no possibility of a significant cumulative effect between it and the proposal in the PEIS. However, the Goshute Tribe, as well as the general public, has had the opportunity to comment on both proposals.

44. Table 1 of Appendix B to the DEIS shows the relationship of sonic boom overpressures created by the F-16 as compared to other Air Force fighter aircraft that may occasionally use the UTTR. However, the main text of the PEIS continues to use the F-16 as the aircraft impacting the environment in the airspace under consideration. As long as the described F-16s are based at Hill AFB, it will be the predominant fighter aircraft utilizing the UTTR. Special exercises involving other type aircraft are small in numerical comparison and will have their air-to-air training concentrated over the airspace already designated for supersonic flight.

45. Yes, Table 1 in Appendix B of the DEIS does show that the F-16 and F-15 aircraft created sonic booms of different intensities because they are of different size and shape. However, the table depicts nothing about sonic boom activity. Extrapolations were made from F-15 data because the two aircraft have similar maneuvering capabilities in air-to-air training. The basic extrapolations used were: (1) the two aircraft use a similar amount and configuration of airspace during their air-to-air maneuvers; (2) the two aircraft would both average about two and one-half supersonic excursions during a single air-to-air sortie, and (3) the average speed of both aircraft during the supersonic event would be about Mach 1.1. You should note that the intensities of sonic booms created by the F-16 are lower than those created by the F-15. For analytical purposes, we used F-15 data to err on the side of caution.

46. This PEIS addresses a reduced scope proposal as a primary alternative being considered by the Air Force. The airspace involved in the reduced scope proposal has full radar coverage down to 5,000 feet AGL.

47. Appendix B of the PEIS discuss the phenomena of focus booms. The important factor to remember is that a focus boom occurs only at a specific location and does not move as the aircraft moves. The probability, under a most conservative estimate, is no greater than 0.003 that anyone on the ground will get focus booms. If the focus is at a high altitude, it can have no effect on people on the ground.

48. Only the sonic boom or overpressure is generated, its propagation is affected by the same physical laws, independent of the type of aircraft involved. However, the size and shape of the aircraft does have a direct bearing on the magnitude of that initial disturbance. See response 44.

49. The worst case monthly loading identified in the EIS is the maximum of air-to-air sorties expected in any one month.

50. It is true that the booms experienced will be during daylight hours. However, the use of average sound level is the preferred method for quantifying human response to sonic boom exposures. It is recommended by CHABA and has been adopted by pertinent Federal agencies. All day-night average sound level criteria, as developed by EPA and used by HUD, DoD, DoT, and others, are long-term, preferably annual averages. This is also in accord with American National Standard S3.23-1980, "Sound Level Descriptors for Determination of Compatible Land Use." Based upon a worst case analysis, it is predicted that 99% of the time any single ground location will experience less than four booms per day, in fact one spot on the ground will only hear a boom 35% of the time. Reference PEIS summary. Conversion of the 419 TFW to F-16s has not been taken into account with our calculations and figures. Although activity will increase during the summer months, our worst case is based upon these increases.

51. The proposed action now being considered by the Air Force reduces the scope of the original proposal, thus eliminating a portion of Antelope Valley as a supersonic flight area. See response 41 and chapter II of the PEIS.

52. The airspace currently approved for supersonic flight is an extremely valuable asset to the DoD because it is located entirely over land which they control. The F-16 is a dual role aircraft in that it can perform both air-to-air and air-to-ground missions and its pilots must receive training in both areas. By the very nature of its requirement (delivery of weapons on ground targets), air-to-ground missions must be flown in airspace where the ground is also controlled. As long as the F-16 is based at Hill AFB there will be a requirement for both types of training. For reasons of safety and security, special tests and exercises must often be assigned to these same test ranges. This type asset is limited in the United States. The Air Force and the DoD make the best possible use out of these assets when they determine where special tests and exercises will be held.

53. The Air Force does not agree with the idea that airspace now approved for supersonic flight and the controlled land lying beneath is being used for purposes not originally authorized. Weapons systems have changed, but this

area continues to be a multi-use test area for those weapons, as it has since the bombing ranges were formed.

54. The Air Force believes that the criteria used in evaluating the viability of utilizing the Lucin MOA is adequate. Reference 2.2.1 of the FEIS.

55. The Air Force has no practical means of knowing if noise complaints exist unless they receive them. Although the availability of a telephone system in an area may effect the number of complaints received, it does not preclude the utilization of a mail system. Based on the lack of complaints received, the Air Force feels it is reasonable to assume that the degree of the problem is less on the reservation.

56. As stated in the FEIS, the Air Force does not believe that the health and well-being of the people on the ground is impacted. The availability of airspace for commercial traffic was a separate consideration. At no time did the Air Force consider the effect on commercial traffic over the health and well-being of people on the ground.

57. Reference 2.2.1 of the FEIS.

58. Reference responses 6, 31, 32, and 36. The Air Force does not believe that any physical or psychological harm will result if this proposal is approved. While it is true that the areas surrounding Hill AFB receive proportionately more economic advantage, it provides the same national defense benefits to the nation as a whole. The Air Force recognizes that its training mission may affect individuals; therefore, every effort is made to affect as few people as possible and still meet its mission requirements.

59. Correct. During a plane's maneuvers at high G loads, airspeed does drop off quickly. If the plane remains under Mach 1 below 15,000 feet AGL, sonic booms will not be created. This should not be interpreted to mean that Mach 1 will never be exceeded below 15,000 feet AGL. The aircraft may continue their air-to-air maneuvers down to 5,000 feet AGL and the pilots should not have to worry about speed limits in the entire regime. It should be noted that it is estimated that 90 to 95 percent of the supersonic activity will be done at elevations above 10,000 feet AGL.

60. The Air Force published and mailed out its Notice of Intent to Prepare a Draft EIS in August 1980. A copy of the Notice was sent to the Bureau of Indian Affairs (BIA), Eastern Nevada Agency, specifically because of the Goshute Reservation. When no comments or concerns were forthcoming, Hill AFB contacted the Eastern Nevada Agency of the BIA to verify that the Goshute Tribe had indeed received notification. The superintendent assured the base that the notification had been made in a Goshute Tribal Council meeting and that no comments were obtained at that time. It never was the Air Force's intent to exclude the Goshute Tribe from the "scoping" process.

61. Comment noted. The methodology in 4.6.1.3 of the FEIS is the method by which we evaluated the impact of noise on qualities or quality of life.

62. It is not the intent of the Air Force to lower the air quality to meet national standards. The emission of pollutants is an unavoidable consequence of flying aircraft. It should be noted that 90 to 95 percent of the supersonic activity will take place above 10,000 feet AGL and will be above the afternoon average mean mixing height. Because the mean mixing height is an average and the vast majority of supersonic activity occurs above it, the benefits realized from a variable minimum altitude restriction would be insignificant.

63. The Air Force feels it has given adequate consideration to the effects of continuous sonic boom activity on humans, animals, and structures. The assumption that the Goshutes would be exposed to eight to ten sonic booms per hour is in error. Referencing Appendix C of the DEIS, the probability of hearing seven sonic booms in one day is less than 0.01. Under the proposed action in the FEIS, only on rare occasions will an individual on the Goshute Reservation ever hear a sonic boom. In regard to the Oklahoma City test, the area involved received eight to ten booms per day over a six-month period and did consider urban, suburban, and rural residents. Since the probability of receiving eight to ten booms under the DEIS is less than 0.01, the reliance on results from the Oklahoma City test was justifiable and conservative. The exposure to sonic booms at Oklahoma City was at least three times greater than the exposure within the Gandy MOA.

64. Reference 4.6.1.3 of the FEIS. The probability is dependent upon individual subjects. Under the FEIS preferred alternative, the probability is 0.

65. The analogy is not applicable. Also, see responses 50, 61, and 63.

66. Reference 4.1 of the FEIS.

67. The very fact that a 24-hour average sound technique is used makes the scenario unrealistic. The Air Force concedes that a single event of this type (5,000 feet AGL at Mach 1.3) may occur on rare occasions, but the chances that all aircraft during any 24-hour period would meet those conditions is totally beyond the realm of probability.

68. Reference 4.16 , Bibliographic Reference, in the FEIS. The results are contained in referenced report 20.

69. A worst case analysis was conducted and compared to general scientific consensus opinions on the subject. In this context, the Air Force believes the EIS is adequate and meets the intent of the NEPA. Reference 4.13.1 of the FEIS. Also, see response 32.

70. The airstrip referenced is currently under restricted airspace. The Air Force is presently trying to establish Memorandums of Understanding with

individuals who have a legitimate need to use restricted airspace. The FAA proposal is a separate action not associated with the proposal for increased supersonic operations.

71. Copies of the referenced report (#39 Bibliographic Reference) are available for review from HQ TAC/DEEV, Langley AFB, VA. The contractor was used to ensure accurate and objective results were obtained.

72. Comment noted. Reference 4.3.4 of the FEIS.

73. The Air Force is predicting that only about 30 percent of the booms generated will ever reach the ground. It is also predicted that 90 percent of the time any single ground location will experience less than four sonic booms per day.

74. The Air Force estimate represents a worst case.

75. The consensus of the scientific community is that no physical or psychological harm will occur. Also see responses 6, 31, and 36.

76. The action will not have a significant impact on the Goshute Reservation. Also see response 51.

77. The Air Force believes the DEIS is accurate and meets the intent of NEPA.

78. The sophisticated navigation equipment on board the F-16, extensive FAA radar, coupled with the discipline and professionalism demanded of today's fighter pilot, makes incidents of wandering far from the prescribed course extremely rare. Dedicated training, constant evaluation and continual supervisory attention ensure that only the most qualified individuals fly high performance aircraft.

79. As mentioned, this proposal relates solely to the increase of airspeed above 5,000 feet AGL in area of the Gandy MOA. The authorization to conduct military operations in this area has existed for several years. The FAA was established as the authority to control all airspace and designated the Gandy MOA for military use in 1976. That use is not affected by this proposal. In fact, FAA does not impose restrictions on airspeeds within the MOA. The authorization to use the MOA remains uncharged by this proposal. The proposed action identified in the FEIS avoids supersonic flight above all of the Goshute Indian Reservation.

80. The Air Force does not anticipate any damages will result from the proposed action. However, if damage occurs, damage claims will be evaluated based on facts presented. The Air Force acts on every reported incident of damage attributed to sonic booms and reaches a decision on its validity only after careful consideration of all factors. Also see response 273.

81. In response to your comment, the problem is not one of abuse or difficulty, it's a matter of understanding. The Sells airspace is used predominantly by units at Luke AFB, Davis Monthan AFB, and the Air National

Guard. The airspace is also used frequently by units from the Navy, Marines and various other DoD organizations. The users of this airspace operate essentially every aircraft in DoD's inventory in a variety of missions and activities. The general public has difficulty in identifying types of aircraft, aircraft speed, altitude and mission, and it is easy to see why many instances of proper flying activities are mistaken for pilot abuse or violation of FAA and Air Force regulations. This is not to say that violations do not occur. However, when one considers the hundreds of sorties flown each month in the Sells airspace, actual violations of airspace regulations are the exception and not the rule.

When the occasional violation does occur that causes damage, claims can be filed to obtain reimbursement for the damages. Davis Monthan AFB has claims jurisdiction for the Sells airspace. After the 1979 public hearing held on the Papago Reservation, the Air Force realized that the Standard Form 95 (claims form) was too complex for a people who understood little English and had no written language of their own. To make filing of claims easier and less complex, Davis Monthan began taking collect calls for claims and would reimburse amounts up to $100 for claims that seem reasonable without requiring further action from the claimant. Further, Davis Monthan personnel began making monthly visits to the Reservation to settle any claims. (This was in addition to taking collect telephone calls.) However, because claims were filed so infrequently, these visits were later reduced to once every six months. Today, because so few claims are filed by the Papagos, the visits every six months have been discontinued and claims are handled by Davis Monthan personnel as they occur.

Should the Air Force choose to implement the action addressed in this document, they will maintain an open dialogue with the Goshute Indian Reservation.

82. No additional MOAs are being proposed under this action. Also, reference 4.4 of the FEIS.

83. See responses 6, 32, 36, and 37. Also refer to 4.4 of the FEIS.

84. The Air Force does not view the risk of a bird strike as unacceptably high. Reference section 4.3.3 of the FEIS.

85. The Air Force feels that the studies are adequate. See response 40.

86. Consideration of all the available literature indicates that bighorn sheep will not be severely stressed. Reference 4.1 of FEIS. Comment on wilderness study areas noted. Also see response 131.

87. For the reasons identified in response 52, it is not practical to relocate existing ground targets. Although the proposal to realign restricted airspace is a separate and distinct issue, the Air Force does concur that a valuable air traffic control service can be offered in restricted airspace.

88. The Gandy Range is considered to be the maximum distance away to still be practical for daily air-to-air sorties for the F-16. A though areas to the

south could be used on a sporadic basis, it would fail to meet current training requirements. The Nellis Range in southern Nevada was considered; however, they too do not have enough airspace to meet their current and projected mission requirements.

89. Reference 4.2.2 of the FEIS. The general concensus of the scientific community is that there is no deleterious effect on cattle or milk production from exposure to sonic booms. Additionally, the region in question is south of the area under consideration and will not be impacted by the proposal.

90. Reference 4.1 of the FEIS and also 24 Code of Federal Regulations, Housing and Urban Development: Part 51, Environmental Criteria and Standards.

91. Reference Chapter IV of the FEIS.

92. First sentence is true. Second and third sentences are correct. Exception is taken to the claim that the planes are a nuisance or a mortal hazard. The noise may be an annoyance, but it causes no harm or injury. After 76,517 hours of flying time, between January 1979 and 31 December 1982, there has been no property damage of loss of civilian life resulting from an accident within the region of the Utah Test and Training Range. Therefore, the Air Force believes that the proposed action does not constitute a mortal hazard. Also see response 3.

93. This conclusion is not supported. Reference 4.2.2 of the FEIS.

94. The Air Force has attempted to identify the regions with the least population which still meet the selection criteria in 2.2.1 of the FEIS.

95. The Air Force is only saying that there will not be a significant adverse impact to man or animals. Also see response 32.

96. This is not supported by studies which have been accomplished for the Air Force. Reference 4.4 of the FEIS.

97. This contention is not supported. Reference 4.2.1 and 4.2.2 of the FEIS. Also see response 36.

98. Reference Chapter IV and section 4.4 of the FEIS. Comment noted. The Air Force feels it has explored all reasonable alternatives.

99. In restricted airspace, emergency aircraft (ambulance service, fire suppression, etc.) always have top priority and are immediately routed through the airspace. This is accomplished by the 299th Range Control Squadron. MOAs, on the other hand, are joint use, see-and-be-seen airspaces. The Air Force has no control over non-military usage of the MOA, but could assist emergency situations by keeping military aircraft clear if necessary.

100. MOAs will continue to be joint use airspace and the Air Force (at Hill AFB) is presently trying to estaolish Memorandums of Understanding with

individuals who have a legitimate need to use restricted airspace. It is the Air Force's policy to accommodate those needs.

101. The Gandy airspace is currently a MOA down to 100 feet AGL. The adjacent restricted airspaces R6405, R6406 and R6407 (also involved in this proposal) extend down to the ground surface.

102. The Air Force feels that these areas have been adequately explored. Also see responses 32 and 37.

103. The proposed action will have no impact on the Pilot Peak area. Studies addressing the impact of sonic booms on fish are referenced in Appendix B and 4.2. of the FEIS, and 4.2.2 specifically addresses the rare cutthroat trout found in the Deep Creek Mountains.

104. The planned bighorn sheep transplant into the Deep Creek Mountains is addressed in 4.3.4 of the FEIS. As stated in Appendix B of the FEIS, observed responses of bighorn sheep to sonic booms have been minimal. Impacts on reproduction behavior of wildlife in general have also been studied with the results showing minimal response for sonic booms of the magnitude involved in this proposal. Biological reproduction is usually considered the most delicate and sensitive of behavior patterns. In the absence of reliable evidence to the contrary, we expect that a transplanted population would not exhibit a more sensitive behavior. Also, the proposed action being considered by the Air Force does eliminate a good portion of the Deep Creek Mountains from the area of impact.

105. Comment noted. The Air Force is willing to discuss the benefits of a joint monitoring study as a mitigation measure.

106. We do not anticipate that the communities of Wendover or West Wendover will be impacted by sonic booms generated by normal operations. Although it is theoretically possible that an overpressure may travel that far, it is highly improbable. In regard to raptors, simulated sonic booms were generated all across the State of Arizona. Low-level flights were arranged only across the southern third of the state. No nestling death or eyrie abandonment could be attributed to the stimuli. Domestic animals and wildlife studies have been performed in many areas around the world. The general concensus of the scientific community is that behavioral responses to sonic booms are minimal, sonic booms do not affect reproduction, nor pose a threat to fish or fish eggs. See the Bibliographic Reference section of the FEIS numbers 40, 13, and 19.

107. Table 1 in Appendix B of the FEIS shows calculated overpressures for ground levels at both 5,000 feet MSL and 6,000 feet MSL. The differences are small. For instance, an aircraft flying at 20,000 feet MSL at Mach 1.1 would generate sonic boom overpressures of 2.40 psf and 2.53 psf at ground elevations of 5,000 feet MSL and 6,000 feet MSL, respectively.

108. Correct; however, the vast majority of the aircraft utilizing supersonic capabilities will be the F-16. See response 46.

109. Correct, but the Air Force analysis is the worst case.

110. An observer on the ground beneath an F-16 flying subsonic at an elevation of 1,000 feet AGL in afterburner would experience a noise level of about 112 dB (A-weighted overall sound level). The same aircraft at 500 feet AGL would produce a 121 dB level, while at 2,000 feet AGL a noise level of about 104 dB could be expected.

111. Correct. See response 47.

112. Correct. Correction has been made.

113. The Air Force feels its discussion is adequate, especially since it is believed the species will not be impacted.

114. This is discussed in 4.3.2.1 of the FEIS.

115. The concensus of the scientific community is that while some interference may occur, it is unlikely and unproven that it will be significant. Also see response 37.

116. Bird strikes with the peregrine falcons would be an extremely unlikely event. Obviously, this would result in the death of the falcon. The Air Force has been studying the impact of bird strikes on aircraft for several years.

117. This would preclude the low level training requirement from being met. However, air-to-air (including supersonic) maneuvers will be accomplished above 5,000 feet AGL.

118. The inner ellipses, which show approximate maneuvering areas, are located over relatively flat valley areas. However, the outer ellipses, which depict the extent of overpressure propagation, may extend into the mountainous areas.

119. Comment noted. These WSAs are included in the FEIS.

120. The Air Force has consulted with the State Historic Preservation Office and the BLM. No sites are proposed or listed on the National Register. Neither agency expressed concern over any archaeological sites.

121. Thank you.

122. The Air Force feels that these impacts have been adequately addressed. Also see responses 6, 32, 36, and 37.

123. See responses 5 and 176. A list of those notified was included in the DEIS.

124. Since the DEIS represents a worst-case scenario, you could expect less.

125. Table 1 in Appendix B of the FEIS provides overpressures that would be experienced at ground level from aircraft flying at minimum elevations and maximum anticipated speeds (Mach 1.3).

126. Table 2 in Appendix B of the FEIS provides empirical values for the lateral extent of sonic booms generated at several elevations.

127. See response 3. The military services, however, do routinely share airspace to maximize the use of existing facilities and thus reduce as much as possible the need for new facilities. The FAA has responsibility for managing and allocating airspace. They can and do deny military requests for airspace. The Air Force recognizes the concern but feels that it is a separate issue not associated with this proposal.

128. Comment noted. The Air Force believes the EIS adequately evaluates these concerns.

129. The Air Force has provided the most accurate predictions possible, including a worst case. Complaints can be registered with the Public Affairs Office, Hill AFB, UT 84056. Also see response 3.

130. There is no evidence to support the contention that the action will significantly impact the learning process. The Air Force does not view this action as an infringement on the right to a public education. Note that the new reduced scope proposal takes this region out of the impacted area. The Air Force remains very concerned about any impacts on the nation's populace, especially children. We exist to protect their rights, one being a public education. Also see response 174.

131. This area is not a wilderness area and the action will cause no irreversible damage to unique areas.

132. The F-16 is equipped with highly sophisticated airborne navigation equipment designed to let the pilot know his position at all times. It also has an advanced on-board radar system that allows long range detection and avoidance of other airborne traffic. In addition, supersonic flight operations are conducted with two or more aircraft, each monitoring altitude and position of the formation during training activity and picking up other aircraft visually. We feel the potential for disaster is low.

133. The results of studies referenced in the EIS negate this claim. Low-level flights are not a part of this proposal. Section 3.1.4.2 of the FEIS deals with threatened and endangered species only.

134. See responses 39 and 127. The Air Force feels that there has been an adequate opportunity for public comment on recent proposals.

135. There will be no significant change to existing conditions, therefore, no discussion is required. Further information on noise impacts from Hill AFB can be obtained from the 1982 Hill AFB AICUZ report on file at 2849 CES/DEEXX, Hill AFB, UT 84056.

136. Flight patterns have been chosen with this goal in mind.

137. Military aircraft must be able to successfully compete in all anticipated environments in order to ensure a strong national defense. Because noise controls adversely effect the efficiency of an aircraft, military aircraft are exempt from the noise controls utilized on commercial aircraft. This ensures that military aircraft are able to perform in the most efficient manner possible.

138. This proposal to increase the airspeed of aircraft already operating in the Gandy MOA will have no impact on private or commercial use of the airspace. Current procedures for access to the MOA by private and commercial aircraft will not change. Travel time to and from adjacent communities is not affected by this proposal. The use of restricted airspace by nonmilitary users adjacent to the Gandy MOA remains unchanged.

139. Section 5.8 of the FEIS addresses the possibility of making minor elevation changes to the proposed floor of 5,000 feet AGL.

140. When below 5,000 feet AGL, the planes will be subsonic. Pilots currently fly low-level sorties in this area. See response 3.

141. This contention is not supported by the analysis performed in the EIS nor by any consensus of expert opinion. The Air Force has concluded that the majority of the evidence indicates that there will be no adverse impact on personal health, property, or wildlife. Also see responses 6, 32, 36, and 37.

142. The Air Force wishes to clarify this issue. The Gandy proposal will not restrict additional airspace; however, a separate proposal changed the restricted airspace boundaries in this area. Portions of the Gandy MOA will continue to be for multiple use. If this supersonic proposal is approved, the Air Force will be permitted to fly at supersonic speeds above 5,000 feet AGL. Restricted airspace proposals are evaluated by their own merits considering environmental and public review.

143. See response 98. Public hearings were also held with the Goshute Indians. The Goshutes had no input regarding impact on their use of sacred sites. Therefore, we have no reason to suspect that such an impact exists.

144. The contributions of NOx and SOx are insignificant. See Table 1.0 of FEIS. The US EPA is currently conducting studies to determine if and how much NOx and SOx contribute to "acid rain". Currently, the chemical reactions which occur are not completely understood. The Air Force feels that if these pollutants do contribute to acid rain, the amounts produced by this proposal are too small to even be measured as a contribution. Also see response 62.

145. This area currently receives noise from low level flights which accounts for much higher background than discussed in the referenced CHABA report. The decibels normally predicted by this proposal do not represent a significant increase over existing background levels.

146. The EIS process is designed to provide information to the public and decision makers. See response 5. All requests for information have been responded to. The Air Force feels that the EIS is a full disclosure document.

147. Reference 4.2.2 of the FEIS and response 37. There is no evidence to support the commentor's concern about the proposed action having serious adverse affects on deer, antelope and raptors. The sooty tern incident referenced involved an exposure to an extremely intense sonic boom overpressure, more than an order of magnitude greater than anything expected from this proposal. The general consensus of the scientific community is that there is no deleterious effect on wildlife associated with exposure to sonic booms of the intensity expected from this proposal. Also see responses 6, 32, 36, and 84.

148. The Air Force feels the potential for bird-aircraft strikes in the UTTR airspace is small. However, in an attempt to make that potential even smaller, the Air Force has been involved in programs to monitor seasonal and daily flyways of the birds in the area.

149. It is the Air Force position that the proposed action would definitely enhance the quality of training available to military pilots; training that could someday improve their chances of surviving a wartime situation. It is also the Air Force's position that this benefit can be obtained without significant adverse impacts to the agricultural interests of the area.

150. This comment does not apply to the Gandy FEIS proposal; however, it has been forwarded through the proper Air Force channels for investigation.

151. The total number of booms per day referred to in the FEIS is considering the entire area which is proposed for supersonic flight. At any one ground location it is much less. Under the normal operating conditions for the proposed action, any single location would experience three or less sonic booms per day at least 90 percent of the time.

152. Comment noted. The Air Force recognizes that the proposed action may cause annoyance; however, there will be no irreversible damage.

153. The Air Force is dedicated to preserving and protecting the environment. Other alternatives, including the one you recommend, were considered but did not meet the selection criteria outlined in 2.2.1 of the FEIS.

154. The worst case situation may occur occasionally. The number of supersonic sorties is discussed in 2.1.1 of the FEIS. We wish to stress that the worst case is expected to occur only on a sporadic basis. It should in no way be considered as the norm.

155. Section 2.2 of the FEIS provides the thought process involved to look at alternatives to the proposed action.

156. See response 118. Also, the reduced scope proposal addressed in the FEIS would eliminate a major portion of the Deep Creek Mountains from the area of concern. However, set ups for air-to-air sorties will still take place in this airspace.

157. The Air Force has relied on the most current studies available. The DEIS does not discuss any marked increase in low-level subsonic activity and none is expected to occur. The potential for an increase in air-to-air sorties does exist, but because of the altitudes at which this would occur, the impacts of subsonic flight are negligible.

158. Because the DEIS was written over a five-year period, the status of the HUS Arena has changed significantly since the DEIS was first drafted. The HUS Arena is now a concrete proposition which will be operational in the very near future. See response 41.

159. The FEIS addresses a reduced scope proposal as a primary alternative which does not include any of the Goshute Indian Reservation. The Air Force has been, and will continue to be, concerned about all American citizens, regardless of race, color, or creed. The Goshute Indians were included in the public participation process, specifically to discover in which ways their culture would be impacted.

160. The comment is noted; however, the need for additional airspace is well documented in the DEIS.

161. These increases occur sporadically and are addressed as a worst case within the EIS. Also, see response 157.

162. This comparison is used because it represents the best possible information available. The Air Force feels that the F-16 maneuvering configurations are roughly equivalent to the F-15 and, therefore, provides an adequate base for the prediction of impacts from the F-16. Also, see response 45.

163. The majority of air-to-air sorties will occur above 10,000 feet AGL, and it is estimated that 90 to 95% of the supersonic activity will occur above this altitude. Therefore, only rarely will the pilots need to be concerned with the 5,000 foot AGL restriction. The elvation of 5,000 feet AGL is now the floor for all air-to-air sorties. For safety purposes, the pilots must break off their combat maneuvers should they ever drop to this altitude. It is true that this causes the pilot to monitor his elevation; however, monitoring altitude would be a requirement during actual wartime maneuvers, whereas monitoring speed just to insure that subsonic speed is not exceeded would not.

164. The Air Force feels that this activity is adequately assessed. Also, see response 44.

165. The worst case condition does include room for the additional flights from the 419 TFW as stated in 2.1.1 of the FEIS.

166. Whenever possible, air-to-air and air-to-ground missions are assigned to the same airspace. In fact, this happens quite often. Conflict with air-to-ground missions is probably the least significant of the reasons sited for bumping air-to-air sorties out of airspace already approved for supersonic flight.

167. See Figure 1 of the PEIS. Currently this area is also used by the U.S. Army and would not be compatible with supersonic air-to-air sorties.

168. The impacts are addressed objectively and specifically. Subjective judgements are not imposed on the reader, but are offered in this case, as a consensus of the preparers.

169. We believe the comments referred to low-level subsonic flight, for which there is no anticipated increase predicted.

170. The Air Force does not anticipate additional impacts from an increase in subsonic flight. There is no anticipated increase in low-level subsonic flight as a result of this proposal.

171. Research on propogation of booms has been conducted, but the report did not cover focus booms. The referenced research was not available for this statement, but NEPA requires that if the research results significantly affect this statement, we will have to amend the statement.

172. In the sentence cited, the Air Force is not saying that adaptation will occur but only pointing out the obvious that startle responses will follow appropriate stimuli. Also see response 31.

173. In order to accommodate this and other concerns, the Air Force has generated a new proposed action, significantly reducing the size of the airspace originally proposed.

174. The Air Force acknowledges that the occurrence of sonic booms will be an additional disruption to the classroom environment. The reduced scope proposed action should all but eliminate this impact. We wish to point out, however, that the disruption is short term. These disruptions are analogous to daily occurrences within a classroom. For example, a lawn mower goes by a window, a lunch pail is dropped, a bell rings, or a joke is made. We do not consider the sonic boom activity as a continuous significant disruption. Also see response 130.

175. The Air Force does not believe that additional military aircraft is a correlate of additional hazard. Instead, technological advances in on-board radar and better training have substantially reduced any remotely associated risks. Also, within the airspace involved in the reduced scope proposal, aircraft will be tracked by radar down to the air-to-air combat arena floor of 5,000 feet AGL. Also see response 132.

176. Response 5 outlines the steps that were taken during the EIS process for this action. Written notifications were provided to the State Clearinghouses at each significant step (i.e., Notice of Intent, Release of DEIS, and Notice of Public Hearings) along the way. Plus, similar actions were taken before the environmental analysis was upgraded to a DEIS. The Air Force relied in part on the State Clearinghouses and reviewers to disseminate information on the proposal.

177. The joint use policy will not prevent regular and predictable access by the DWR.

178. The DEIS does this. Reference 4.3.2 of the FEIS.

179. There can be no concrete assurances made. Mission requirements can and do change, although no changes are proposed at the present. Limiting weekend flights will be a policy; however, it does not preclude meeting mission requirements. We disagree with the comment which states that a mitigation measure must be in the proposed action. Mitigation measures may be properly proposed and integrated into a Record of Decision.

180. The studies utilized were the most pertinent and timely studies available. The Air Force feels that including the most pertinent and timely studies in an EIS is appropriate.

181. This reference is available for review upon request. The Air Force does not believe that individual citation is required in accordance with 40 CFR 1502.21. The DEIS incorporates reference data from the survey as a whole, and did not incorporate specific individual investigations noted in the survey.

182. Reference 180.

183. The intent of citing the adobe house study in Arizona was to illustrate that it reacted in a similar nature to conventional construction, which there is an adequate data base for evaluation.

184. Comment is incorrect. The text states that the Deep Creek Range is 7,800 feet above the desert floor, not 7,800 feet MSL.

185. Pages ii through vi are summary pages and 2.2 has been revised to fully address the alternatives.

186. While the Gandy Extension was outside the optimum 100 NM training radius, it is still within the training range of the F-16, the FEIS has been modified to include a 200 nautical mile radius. In order to use the southern Nevada ranges, aerial refueling would be required for each and every sortie. The 388 TFW's combat role is to deploy to operating bases close to the front lines during war so aerial refueling is not as important a part of their pilots' training as is combat training. Aerial refueling training is accomplished routinely, but to utilize it on every sortie would be extremely expensive.

187. See response 1 and the reduced scope proposal presented in the FEIS.

188. There are no anticipated long term effects from sonic booms on individuals. The Air Force has reviewed all the known pertinent research on the area of health effects. The impact on residents and visitors does recognize that there may be an annoyance factor. Also see responses 6, 32, and 36.

189. There are no studies specific to bighorn sheep response to sonic booms which the Air Force is aware. Observations regarding the responses of bighorn sheep to sonic booms is available in Appendix B of the FEIS. Also see response 104.

190. Proposed and potential increases were not excluded from the DEIS. All known increases were evaluated. If any future mission requirements require a change beyond the scope of the FEIS, they will be environmentally assessed. There are no guarantees that there will not be any additional future growth. Mission requirements can, and often do, change.

191. The Air Force does not anticipate the reactions of reintroduced animals to be different from resident populations. Military operations will not preclude State and Federal wildlife agencies from the establishment of once-native species. Also see responses 37, 85, 104, and 148.

192. The Air Force has requested and received formal section 7 review and comments from the Department of Interior, Fish and Wildlife Service, and State of Utah Division of Wildlife Resources.

193. The table in section 4.1 can be used to estimate the overpressures at ground elevations higher than 6,000 feet AGL. For a rough approximation, simply compare the elevation differences (i.e., overpressures at ground level of 5,000 feet MSL and an aircraft at 20,000 feet MSL would compare to overpressures at ground level of 10,000 feet MSL and aircraft at 25,000 feet MSL). Also, as indicated in response 118, air-to-air combat maneuvers will not normally be performed directly over mountain areas.

194. Comment noted. The peregrine falcon siting occurred after the public release of the DEIS. The siting is now referenced in the FEIS in section 4.2.2.

195. The Air Force does not anticipate sonic boom activity to influence raptor migration patterns. Future activity is not expected to be significantly different from stresses placed on the region currently.

196. Sonic booms in this area are not expected to be frequent and the Air Force does not anticipate any adverse impacts on wintering eagles.

197. Reference 4.2.2 of the FEIS.

198. See response 193 and 4.2.2 of the FEIS. The altitude changes referred to will not make a significant change in the anticipated impact.

199. The Air Force is not familiar with the techniques referenced by the commentor. More specific information is required before a response can be generated.

200. The Air Force does not anticipate the level of sonic boom activity proposed will cause nest abandonment by ferruginous hawks. Raptors seem to be incredibly tolerant of stimulus loads.

201. The probability of a collision with a raptor above 5,000 AGL is negligible.

202. No guarantee can be made. Mission requirements often change and National Defense is the Air Force's first priority. Also see response 40.

203. Supersonic flights will not cause any irreversible damage to proposed WSAs. Reference 4.3.2.1 of the FEIS.

204. Reference 4.4 of the FEIS. Also, see responses 80 and 273.

205. Reference 4.2.1 of the FEIS.

206. See responses 9 and 99. Also, the Air Force is presently trying to establish Memorandums of Understanding with individuals who have a legitimate need to use restricted airspace.

207. The Air Force believes there is no correlation between the number of military aircraft and a risk potential. Also see response 132.

208. No major airways would be impacted by the proposal.

209. The consensus of the scientific community is that there should be no adverse physiological or psychological impact. See responses 32, 36, and 174.

210. The benefit of a strong national defense is spread equally among all citizens of our nation.

211. The Air Force wishes to ensure that only the minimum amount of individuals are impacted while still meeting their training requirements.

212. As mentioned, this proposal relates solely to the increase of airspeed above 5,000 feet AGL in the area of the Gandy MOA. The authorization to conduct military operations in this area has existed for several years. The FAA was established as the authority to control all airspace and designated the Gandy MOA for military use in 1976. That use is not affected by this proposal. In fact, FAA does not impose restrictions on airspeeds within the MOA. The authorization to use the MOA remains unchanged by this proposal. Incidentally, the preferred alternative identified in the FEIS avoids supersonic flight above all of the Goshute Indian Reservation.

213. This has been considered.

214. Those tests were planned for the referenced region and there are no plans to use the Gandy MOA for similar purposes. Also, see response 52.

215. It means no supersonic flight is permitted below 5,000 feet AGL. There have been no deviations because the area has not been designated as supersonic with a 5,000 foot AGL restriction.

216. The Air Force cannot respond to complaints it does not receive. There is no record of complaints received in the Goshute language nor from their legal representatives.

217. All individuals living in or visiting the impacted region have been considered.

218. The 419 TFW has converted to F-16s. The additional 24 F-16 aircraft have been included into the assessments made in the FEIS.

219. We acknowledge that the EPA uses 55 dBA and HUD also has a goal of 55 dBA. Because a sonic boom is a phenomena which occurs over a fraction of a second, the Air Force agrees with the EPA and HUD in regard to using a 24-hour average as the standard. Averaging over an eight-hour period would increase the dBA, but it would be meaningless when compared to accepted standards arrived at over a 24 hour period.

220. The term "highly annoyed" represents the quantified subjective response of a sample populat on exposed to various weighted day-night averaged sound levels in decibels.

221. The concern for health and safety is noted. However, the literature reviewed does support the conclusion that there are no adverse health and safety impacts associated with the levels of exposure expected from the proposed action.

222. Studies performed indicate that the potential for structural damage (other than windows) is extremely low; see 4.2.3 of the FEIS. Section 4.12.3 provides an explanation of the Air Force claims process.

223. Pollutants will be spread over 3,030 square miles. Of those pollutants only 10.6 tons of particulates will be dispersed. The net effect on visibility will be unnoticeable. The amounts of pollutants will not significantly degrade the air quality in the impacted region.

224. Section 4.2.9 of the FEIS provides updated information on the accident history for F-16s stationed at Hill AFB.

225. Three rounds of social surveys were used to obtain dose-response data. This data, indicating 12 percent of the people would be highly annoyed, can be applied with confidence. Also see response 220.

226. Additional information, date, time type of aircraft, etc. needs to be provided to ascertain the validity of a complaint and initiate appropriate disciplinary action. See response 3.

227. Reference 4.4 of the FEIS.

228. The commentor's opinion is noted. See responses 6, 7, 32, 36, and 84.

229. This is a startle response to a stimuli. Reference section 4.4 of the FEIS. Also see responses 32, 36, and 37.

230. The DEIS referenced provides an adequate evaluation of the environmental impacts of the proposal. The Air Force believes it meets the intent of the NEPA.

231. The Air Force does not agree with the commentor's interpretation. Mr Galloway was simply describing the methodology he used to forecast human response to sonic booms.

232. These areas were considered because of their proximity to the alternative's impacted area.

233. Comment noted; however, there are no impacts associated with vegetation.

234. The city of Idapah is not confused with Goshute. Reference Figure 4.1 of the FEIS.

235. The Air Force shares this concern and feels that individuals working on equipment in an area where sonic booms can reasonably be expected to occur, should exercise additional caution. In part, because individuals are aware of the potential to be startled, additional risks should be reduced. When involved in work where a high potential for injury exists, earplugs can be worn. Normally this type of work occurs only for brief periods and probability for a sonic boom occurring concurrently with this type of activity is considered negligible. The Air Force has not been advised of any accidents of this nature which have occurred as a result of supersonic activity.

236. Studies on the impact of sonic booms (noise) have been conducted, see response 32. The Air Force feels that the base of knowledge provided by these studies is adequate to conclude that there should be no adverse health effects associated with this proposal.

237. The comment is incorrect. The proposal does not restrict additional airspace. Also see response 138.

238. The floor referenced is 5,000 feet AGL.

239. Military aircraft below 5,000 feet AGL are flying subsonic. See response 3.

240. Consolidation of airspace for supersonic activities is not considered practical at this time. In general, because of the number of individual

training sorties which must be flown, and the heavy scheduling of all training airspace, approximately the same amount of airspace would be required for a consolidated area. The Air Force has found that locating even several small areas is a difficult task within U.S. airspace. Consolidation, even if possible, would also require abandoning substantial investments in existing facilities around the U.S. and would likely require the construction of additional air bases.

241. The estimates represent a worst case scenario and will not be exceeded.

242. The Air Force does not view use of the area as being any more or less restrictive in any sense of the word. The only difference is that training flights using the area will be permitted to fly faster. This action has no impact on airways outside of the existing MOA.

243. See response 39. The other actions occurring within the State of Nevada are separate, distinct actions. The Gandy Range does not impact any of the other actions referenced and, therefore, does not contribute to any cumulative impact.

244. The referenced study included urban, suburban, and rural areas. The Air Force feels that the data extrapolated from this study can be applied with confidence to the Gandy MOA.

245. Comment noted. We can neither confirm nor deny this contention. However, the frequency of sonic booms is not such that it would normally impact the film industry.

246. Recreational use and tourism is taken into account in the DEIS. Reference 3.1.5.4 and 3.1.5.5 of the FEIS.

247. The Air Force feels that methodology employed and the correlations used are proper and can be confidently applied.

248. Comment noted. Public hearings are only one method of soliciting comments and they are not specifically required by NEPA. After receiving many requests from the public, public hearings were scheduled to solicit additional comments from the effected public.

249. The Air Force recognizes the contribution to national defense made by the States of Nevada and Utah.

250. The alternatives to the proposed action are seriously considered in the FEIS and represent true alternatives to the proposed action. If the airspace was not available, there would be serious degradation to the training of pilots. All other available airspace for air-to-air supersonic combat training is either outside of the distance criteria or is being used at near maximum capacity.

251. The Air Force feels that the impacts on humans and wildlife have been adequately assessed. Also see responses 6, 32, 36, and 84.

252. The economic impacts are adequately addressed in the DEIS; reference section 4.4 of the FEIS.

253. Reference 4.3.2.1 of the FEIS for a discussion of the potential Wilderness Study Areas.

254. The noise impacts from sonic booms is not considered a "small matter" by the Air Force. Although no significant impact is anticipated, this subject provided the basis for the preparation of the EIS.

255. The Air Force's position is that the proposed action will have no significant impact on the statewide or regional utilization of airspace. The proposal neither classified additional airspace as "restricted" nor moves military operations to airspace not already designated for that purpose. The Air Force is simply requesting to go faster in airspace it already uses, and the only adverse impact associated with the proposal is due to the generation of sonic booms which create a localized concern.

256. The Air Force does not consider these alternatives infeasible. They are, for many reasons fully discussed in the document, less attractive. These alternatives are given serious consideration by the Air Force and represent true alternatives to the proposed action.

257. Although the size of the area where the pilots may be called to carry out their duties in a wartime environment may vary, the size and location of their training area must be such as to give them experience in all of the possible environments they may encounter.

258. The 1977 EIS did underestimate future requirements, but it was based upon the best information available at that time.

259. The general consensus of the scientific community is that there are no anticipated long-term health effects associated with this proposal. The Air Force feels, based on the best information available, that this is an adequate and accurate evaluation. Also see responses 6, 32, 36, and 37.

260. This section is accurate and does not imply that scattered grasses are unsuitable for grazing.

261. Mining is important to this area; however, we have seen nothing to indicate that an increase in importance is probable.

262. The Air Force maintains that Mach 1.3 is the highest anticipated speed within the Gandy MOA and that Mach 1.1 is the best average for the occasional excursions into supersonic flight that will occur there.

263. These areas are already fully scheduled. Reference 2.2 of the FEIS.

264. We are unable to determine whether the commentor is referring to restricted airspace, MOAs, airspace that is occasionally flown, and from what point in time. We are unable to generate a response without additional clarification.

265. This proposal does not propose a taking. It simply proposes to permit pilots to fly faster in airspace they already utilize. The study referenced in 4.4 of the FEIS indicates there should be no significant impact on land and property values.

266. This comment grossly overstates the probability of a focus boom. The probability is 0.003 that any one location will experience a focus boom. The factor is 2.5 greater than a carpet boom, not 12.

267. The commentor is probably referring to an incident that occurred during a study in 1968 at Tonopah, Nevada. A windshield was blown out, but the flying operations involved consisted of aircraft at supersonic speeds at extremely low elevations. Ground level overpressures were generated that are at least ten times greater than what is expected under this proposal.

268. Air Force pilots are among the most professional and highly trained pilots in the world. Air-to-air training breaks off at 5,000 feet. Within the HUS Arena, pilots are instructed to break off the engagement as this altitude is reached.

269. Comment noted. The anticipated sound levels from this proposed action are far below the 90 decibel levels reported to be in the immediate vicinity of an airport. The hazard level for industrial workers is a 90 dBA noise exposure for eight continuous hours per day, or its equivalent in time and intensity. This should not be compared to average values of sound levels at a MOA because neither time nor intensity characteristics are similar.

270. This proposal involves no additional restricted airspace. The publication referenced apparently dealt with two separate and distinct proposals that involve some of the same airspace.

271. The maximum expected airspeed for the F-16 in air-to-air combat training is 1.3 Mach. Regardless of the duration, the ability to train above Mach 1 is extremely important to ensure pilot proficiency.

272. See response 1. Population figures were extrapolated from census data and inquiries made to other Federal agencies. Census data is not available for most of the Gandy MOA, many areas are listed as unpopulated.

273. In the event that damage results from sonic booms or similar aircraft activities, Air Force Regulations provide for payment of actual damages caused by the aircraft activities. For example, the actual replacement cost for a broken window would be paid. The Air Force is not allowed to pay for "Inconvenience" claims. Under established claims procedures, claims are submitted to the nearest Air Force Claims facility (in the case for the Gandy Extension, this would be Hill Air Force Base, Utah) where the claim is investigated. Depending upon the amount of the claim, it is adjudicated either at the base or is forwarded to Washington DC for adjudication by Air Force Headquarters. In the event the claimant is not satisfied with the

adjudication, suit may be brought in the appropriate Federal District Court pursuant to the terms of the Federal Tort Claims Act (28 USC 1346 (b), 2402, 2671, 2672, 2674 , 2680). Also see response 80.

274. The community of Ely is not within the area of anticipated impact from the proposed action.

275. Reference 2.2.1 of the FEIS.

276. The Air Force conducts its own search and rescues.

277. No impact on your operations is anticipated.

278. There are empirical equations that can be used to calculate the lateral extent of sonic boom overpressures. Equations of this type were used to generate the numbers in Table 2 of Appendix B of the FEIS. This appendix also provides a discussion on these calculations. Referring to Table 2, the "Cutoff Distance" is the maximum horizontal distance from a point on the ground directly beneath the aircraft that the boom or overpressure will travel. Section 4.1 of the FEIS discusses the cutoff phenomenon. It should be noted that the empirical equations are based on a homogenous atmosphere. Atmospheric variations will have some effect on the magnitude of sonic boom overpressure.

279. The annoyance factor is addressed in 4.2.1 of the FEIS.

280. The restricted airspace R6407 was designated by FAA as restricted from surface to FL 580 (approximately 58,000 feet MSL) before section 694.b was included in the referenced document (DOT FAA 7400.2B). Also, the Air Force is presently trying to establish Memorandums of Understanding with individuals who have a legitimate need to use the restricted airspace.

281. The flights referred to were studied to obtain information on the amount and location of airspace used during air-to-air maneuvers, the altitudes, the speeds, durations of supersonic flight, and the influence of the cutoff phenomenon on limiting booms that actually reach the ground. The Air Force feels the number of flights studied adequately represented this type flying operation. However, the Air Force does plan to further study UTTR operations. See response 47 in regard to focus booms that may be generated from non-straight and level flight. Finally, although the aircraft may have the capability to meet or exceed speeds of Mach 2, these speeds are not in the normal performance envelope for aircraft engaged in air-to-air combat maneuvers.

282. Ideally, airspace within 100 nautical miles would be preferred. However, modifications to the F-16 have increased the operating range to 200 NM. This is only one of a number of factors which were used to evaluate the alternatives. The Gandy Range is considered to be the maximum distance away and still be practical for daily air-to-air sorties.

283. Section 2.2.1 of the FEIS identifies the selection criteria used to evaluate the alternative locations for supersonic flight airspace. The