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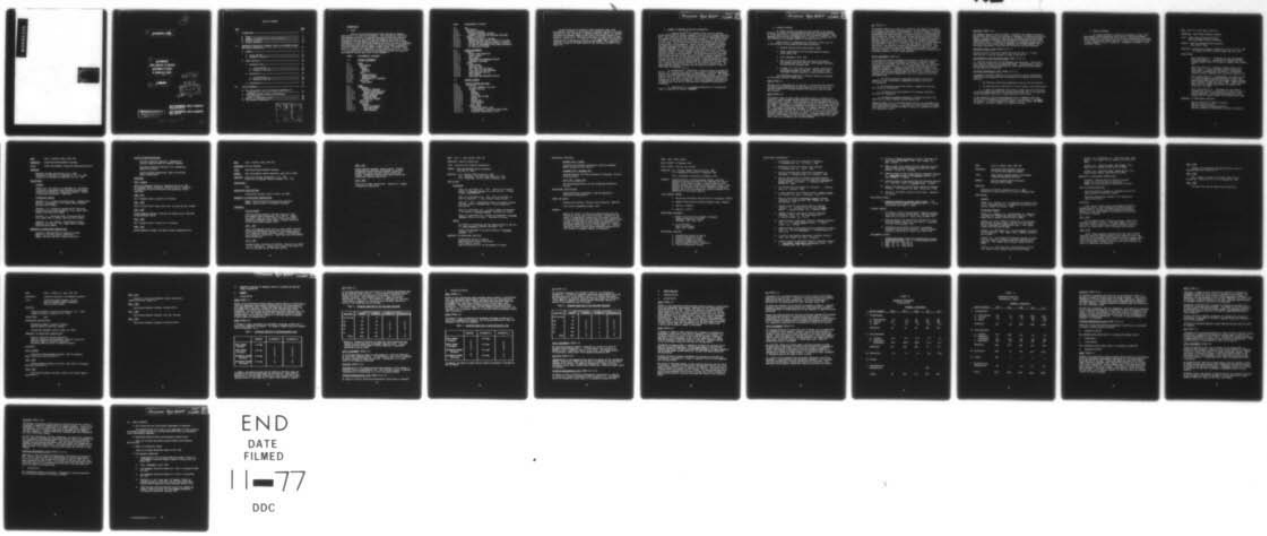

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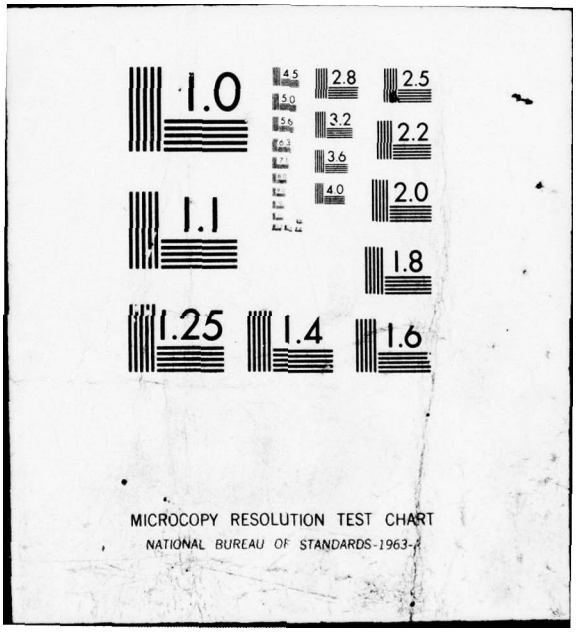
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(9) ENVIRONMENTAL REPORT.

(6) ENVIRONMENTAL IMPACT ANALYSIS OF PROPOSED REALIGNMENT OF FORCES AT LORING AFB, MAINE.

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USAF ENVIRONMENTAL HEALTH LABORATORY
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I. INTRODUCTION

A. SCOPE:

Each Air Force installation has been directed to prepare a description of its existing environment. This description, the Tab A-1 Environmental Narrative, is prepared according to detailed guidelines. These guidelines list and define the environmental attributes to be addressed and provide general guidance on types of data to be included. Furthermore, in order that these documents be readily and easily comparable when evaluating more than one base, Air Force has adopted a standard Air Force Environmental Reference Number (AFERN) System. The AFERN System results in standardized presentation in the installation Tab A-1. Below is a list enumerating by AFERN and environmental attribute the areas of environmental concern dealt with in this document.

AFERN	ENVIRONMENTAL ATTRIBUTE
3.0	NATURAL ENVIRONMENT
3.1	EARTH
3.1.1	PHYSIOGRAPHY
3.1.2	GEOLOGY
3.1.2.1	BEDROCK
3.1.2.2	SURFICIAL
3.1.3	SOILS
3.1.3.1	CHARACTERISTICS
3.1.3.2	BEARING STRENGTH
3.1.3.3	SUSCEPTABILITY TO EROSION
3.1.4	POLLUTION
3.1.4.1	SOLID WASTE
3.2	WATER
3.2.1	HYDROLOGY
3.2.1.1	SUBSURFACE HYDROLOGY
3.2.1.1.1	AQUIFER CHARACTERISTICS
3.2.1.1.2	GROUND WATER MOVEMENT
3.2.1.2	SURFACE HYDROLOGY
3.2.1.2.1	DRAINAGE AREAS
3.2.1.2.2	RIVERS AND STREAMS
3.2.2	WATER QUALITY
3.2.3	POLLUTION
3.2.3.1	SEWERAGE
3.2.3.1.1	'NPDES REQUIREMENTS
3.2.3.1.2	RECEIVING WATERS
3.2.3.1.3	STORM DRAINAGE

AFERN	ENVIRONMENTAL ATTRIBUTE
3.3	AIR
3.3.1	METEOROLOGY
3.3.2	EMISSIONS INVENTORY
3.3.2.1	EMISSION INVENTORY, REGIONAL
3.3.2.2	SUMMARY OF ON-BASE AIR POLLUTANT EMISSIONS
3.3.3	AMBIENT AIR QUALITY
3.3.3.1	AMBIENT AIR QUALITY, REGIONAL
3.3.3.2	MONITORING SITES WITHIN 10 MILES OF THE BASE
3.3.3.3	ON-BASE SAMPLING LOCATION AMBIENT AIR QUALITY
3.3.3.4	AIR QUALITY MAINTENANCE AREA (AQMA) DESIGNATES
3.3.3.5	AIR POLLUTION EPISODES
3.4	BIOTIC ENVIRONMENT
3.4.1	PLANTS
3.4.1.1	NATURAL LAND VEGETATION
3.4.1.2	AQUATIC PLANTS
3.4.1.3	FIELD CROPS
3.4.1.4	THREATENED AND ENDANGERED SPECIES
3.4.1.5	CANTONMENT PLANTINGS
3.4.2	ANIMALS
3.4.2.1	LARGE ANIMALS
3.4.2.2	PREDATORY BIRDS
3.4.2.3	SMALL GAME AND SONG BIRDS
3.4.2.4	FISH, SHELLFISH AND WATERFOWL
3.4.2.5	AMPHIBIANA AND REPTILES
3.4.2.6	SMALL MAMMALS
3.4.2.7	THREATENED AND ENDANGERED SPECIES
3.7	NATURAL HAZARDS
4.4	ACTIVITY SYSTEMS AND PLANS
4.4.2	UTILITIES
4.4.2.1	CIVILIAN COMMUNITY UTILITIES
4.4.2.2	ON-BASE UTILITIES
4.4.2.2.1	WATER
4.4.2.2.2	SEWERAGE
4.4.2.2.3	ELECTRICAL
4.4.2.2.4	LIQUID FUEL SYSTEMS
4.4.2.2.5	HEATING
4.4.2.2.6	NATURAL GAS
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4.4.3.7.2	ELECTROMAGNETIC, RADIATION HAZARD AREAS
4.4.3.7.3	HISTORICAL/ARCHEOLOGICAL SITES

In the discussions of potential impact presented later, each environmental attribute is not necessarily addressed separately, but each attribute has been considered in assessing potential impact. For example, discussion of potential impact on the biotic environment (AFERN 3.4) is based on a review of all attributes noted above as subdivisions of AFERN 3.4 (i.e. 3.4.1, 3.4.2, ... 3.4.2.7). In all cases where a discussion is referenced to an environmental attribute (and AFERN), this discussion is based on a review of all subdivisions of that attribute included in the above list.

B. SUMMARY OF PROPOSED ACTION AND ALTERNATIVES

1. Proposed Action: The proposed action involves reducing Loring AFB ME from its present strength to the level of a forward operating base. This reduction includes inactivation of the 42d Bombardment Wing and its supporting operational and maintenance squadrons. The fourteen B-52G aircraft at Loring AFB would be relocated to other bases at the rate of 1 or 2 per base. The thirty KC-135 aircraft at Loring AFB would be transferred to the Air Force Reserve. Special mission requirements including the 4000th Aerospace Application Group and the 49th Fighter Interceptor Squadron detachment (2 - F106 aircraft) would remain at Loring AFB. A strategic squadron would be activated to maintain the base as a forward operating location. Current manpower authorization at Loring AFB is 3328 military and 656 civilian positions. The proposed action would eliminate 2750 military and 465 civilian positions leaving a residual manpower of 578 military and 191 civilian positions based on maximum reliance on contractual services for base operating support. Flying operations for B-52G and KC-135 aircraft would be reduced from 354 B-52G and 671 KC-135A takeoffs, landings and go-rounds per month to zero and 25, respectively. The approximate 64 takeoffs, landings, and go-rounds per month for F-106 aircraft would be unchanged.

2. Alternative 1: Alternative 1 involves closure of Blytheville AFB AR. This closure would result in inactivation of the 97th Bombardment Wing and its supporting operational and maintenance squadrons. The fourteen B-52G aircraft at Blytheville AFB would be relocated to other bases at the rate of 1 or 2 per base. The KC-135 aircraft at Blytheville AFB would be transferred to the Air Force Reserve. The current manpower authorizations of 2284 military and 383 civilian positions at Blytheville AFB would be eliminated.

3. Alternative 2 is a no action alternative; all installations remain in operation at present strengths.

C. RESEARCH APPROACH

All impact analyses are based on data provided to the project personnel in the Tab A-1 Environmental Narrative for the bases concerned or in the Description of Proposed Actions and Alternatives (DOPAA). These documents were provided from Headquarters, Strategic Air Command (SAC) and were prepared by the command (DOPAA) or the base (Tab A-1).

Other sources of information are referenced in Part III-D or in the following list of agencies/individuals contacted:

1. National Emission Data System (NEDS), USEPA.

2. AP-42, Compilation of Air Pollutant Emission Factors, USEPA, March 1975.

3. Ibid, Supplement, April 1975.

4. USAF Aircraft Pollution Emission Factors and Landing and Takeoff, AFWL-TR-74-303, Air Force Weapons Laboratory, Kirtland AFB NM, February 1975.

5. Furtado, V.C.; D.R. Case, and J.R. Stencel (1972) Burial of Radioactive Waste in the USAF. RHL-TR-72W-9, USAF Radiological Health Laboratory, Wright-Patterson AFB OH.

The methodologies employed in assessing impact are discussed by environment attribute (AFERN) below.

EARTH (AFERN 3.1)

The basic soil characteristics of the soil in the area and the surrounding terrain were determined to be unaffected by this action with the possible exception of drainage problems that may exist, and are noted and discussed.

WATER (AFERN 3.2)

The probable impact on water supply and water quality is related to the quantity of water consumed and the quantity of wastewater discharged to the receiving bodies of water. Water consumption can be estimated by multiplying the number of consumers by an average unit use factor, gallons per capita per day (gpcd). The quantity of wastewater discharged can be estimated the same way. The numbers of personnel involved in a strength reduction, no change, or increase were extracted from the DOPAA or the Tab A-1. Unit use factors were either taken from the Tab A-1 if available, or they were assumed values. Decreased demands were considered favorable. Increased demands were judged relative to the adequacy of the existing sewage treatment facilities and water supplies to accomodate the increased demands.

AIR (AFERN 3.3)

The probable impact on air quality is related to the change in the amount of pollutants discharged to the atmosphere. The five pollutants of concern are suspended particulates, oxides of sulfur, oxides of nitrogen, unburned hydrocarbons and carbon monoxide. Pollutant emissions can be estimated by using operational factors supplied by the base and emission factors developed by either the US EPA or the USAF. Utilizing the mentioned sources an emission inventory is prepared for each base. The numbers of personnel and operations involved in a reduction, closure or no action were extracted from the DOPAA or the Tab A-1. Utilizing the changes in personnel and operations, a new emission inventory was developed for each base. These two emission inventories were then compared with the respective county emission inventory, furnished by the regional EPA office, to determine the percentage reduction in total county emissions.

BIOTIC ENVIRONMENT (AFERN 3.4)

In the absence of major programmed construction or other gross physical modification of existing environment, assessment of potential impact on the biotic environment resulting from a proposed action or alternative approaches the subjective (i.e., it is largely based upon opinion of a competent biologist). A degree of objectivity can be included if each action or alternative is assessed by the same criteria. Bearing in mind that both positive and negative impact can result, the criteria used in reaching the conclusions enumerated in Part II-A relative to the biotic environment were:

1. Are species presently recognized by Federal and/or State agencies as rare, threatened or endangered affected by an action or alternative?

2. Are there any unique biotic areas or communities affected by an action or alternative?

3. Are there any on-going game/wildlife programs affected by an action or alternative?

4. Are there any expected episodes of air/water pollution that might lead to chronic effects on established biota?

Negative answers to all of the above would result in an assessment of no significant negative impact. In the case of a base closure, and thereby the elimination of the existing negative impact, an assessment of beneficial impact would result.

UTILITIES (AFERN 4.4.2)

The probable impact on utility systems is related to the number of personnel and aircraft, and the activity increases or decreases to a particular base and region. A relative figure of impact can be calculated using the percentage increase/decrease of personnel, and considering the availability and limitations of utilities. An increase in personnel is considered insignificant if the existing utility systems could accomodate the increased demand, and is considered unfavorable if utilities are limited and could be overtaxed.

RADIOACTIVE BURIAL SITES (AFERN 4.4.3.7.1)

Radioactive burial sites were located utilizing the Tab A-1. At each base that has a site the location is given in the Tab A-1.

ELECTROMAGNETIC RADIATION HAZARD AREAS (AFERN 4.4.3.7.2)

All radiation hazard areas are non-permanent and controlled. There would be no residual hazard once the operation ceases. Electromagnetic radiation hazard areas are normally associated with radar operation and maintenance and non-destructive inspection.

HISTORICAL/ARCHEOLOGICAL SITES (AFERN 4.4.3.7.3)

Assessment of potential impact on sites of historical and/or archeological significance was approached from the standpoint of answering the following questions:

1. Are there any historical/archeological sites on the installation?

2. Are there any such sites within a 10-mile radius of the installation?

3. Is there any programmed construction or other physical modification of the environment required by the actions/alternatives and, if so, would the construction/modification be in close proximity to such sites?

In the absence of historical/archeological sites or whenever sites were present but unaffected by actions/alternatives, an assessment of no impact was reached. If actions/alternatives suggest a possible impact, the degree of impact is discussed in detail on a case by case basis.

D. PROJECT PERSONNEL

All project personnel currently are assigned to either USAF Environmental Health Laboratory, Kelly AFB TX or USAF Environmental Health Laboratory, McClellan AFB CA and serve as professional consultants to Air Force and other Federal Agencies on items of environmental concern in their respective areas of expertise. Biographical sketches for each individual follow.

NAME: Merrill R. Good, Major, USAF, BSC

PROFESSION: Staff Bioenvironmental Engineer

TITLE: Chief, Special Projects Division
USAF Environmental Health Laboratory

ADDRESS: USAF Environmental Health Laboratory
Kelly AFB TX 78241

EDUCATION: University of Arkansas, Fayetteville, Ark, B.S.Ch.E., 1960
Air Command and Staff College, Maxwell AFB, Ala, 1974

PUBLICATIONS:

Good, Major Merrill R. "A General Plan for Environmental Pollution Abatement." Unpublished Air Command and Staff College research study, Air University, Maxwell AFB, Alabama, 1974.

Good, Major Merrill R.; Vermulen, Captain Erik K.; and Smith, John W. "Technical Report on Waste Discharge to Ocean Waters Vandenberg AFB, California." Unpublished technical report, Vandenberg AFB, California, January 1973.

Good, Captain Merrill R. and Woodmansee, Lt Colonel Terrell R. "Bio-Environmental Engineering Report for Beryllium Demonstration Motor Static Firing at Janet Island, Eniwetok Atoll, Marshall Islands on 23 April 1968." SAMSO TR-68-287, Space & Missile Systems Organization, Los Angeles AFS, California, July 1968.

Good, Captain Merrill R. "Procedures for the Analysis, Treatment and Disposal of Aerozine-50 in Water at Titan II Missile Complexes." Unpublished Aerospace Power Study, Squadron Officer School, Maxwell AFB, Alabama, March 1966.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

American Institute of Chemical Engineers
American Chemical Society
American Industrial Hygiene Association
American Conference of Governmental Industrial Hygienists

EXPERIENCE:

January 1976 - Present

Staff Bioenvironmental Engineer and Chief, Special Projects Division, USAF Environmental Health Laboratory, Kelly AFB, TX. Conducts and manages projects concerned with environmental pollution abatement and control, pesticide management and control, toxicology, and industrial hygiene engineering.

June 1974 - January 1976

Chief, Biomedical Systems Branch, USAF School of Aerospace Medicine, Brooks AFB, TX. Managed the research and development program for evaluation of aeromedical equipment and systems for use in USAF aeromedical airlift.

August 1973 - June 1974

Student, Air Command and Staff College, Air University, Maxwell AFB, Alabama. Research study was on development of an effective environmental pollution abatement control program.

January 1971 - August 1973

Chief, Bioenvironmental Engineering Services, Vandenberg AFB, CA. Supervised an extensive base program involved with environmental protection, industrial hygiene, toxicology, and health physics. Special emphasis was placed on the application of these programs to the Air Force missile test program; specifically, air and water pollution control of toxic missile propellants and exhaust products. A comprehensive environmental pollution abatement and control program was developed for the base.

January 1969 - January 1971

Chief, Bioenvironmental Engineering Services, USAF Hospital Clark Air Base, Republic of the Philippines. Supervised a comprehensive military public health and industrial hygiene engineering program.

September 1966 - January 1969

Staff Bioenvironmental Engineer, USAF Space and Missile Systems Organization, Los Angeles, California. Consultant to all space and ballistic missile research and development programs.

June 1964 - September 1966

Bioenvironmental Engineer, 381 Strategic Missile Wing (Titan II), McConnell AFB, KS. Consultant to Wing Commander on toxicity of missile propellants. Performed extensive noise and acoustic surveys of the Missile Combat Crew Control Center.

October 1960 - June 1964

Sanitary and Industrial Hygiene Engineer, Wurtsmith AFB, MI. Supervised the base public health, sanitary, and industrial hygiene engineering program. Participated in wet test validation study of Titan II missile system at McConnell AFB, KS from October 1962 to January 1963.

August 1960 - October 1960

Student, "Military Aspects of Sanitary and Industrial Hygiene Engineering," USAF Medical Service School, Gunter AFB, Alabama.

June 1960 - August 1960

Process Engineer, Philblack Plant, Phillips Chemical Company, Borger, TX.

NAME: John J. Gokelman, Major, USAF, BSC

PROFESSION: Consulting Bioenvironmental Engineer

TITLE: Chief, Environmental Protection Engineering Division

EDUCATION:

Manhattan College, New York NY, B.C.E., 1959
University of Pittsburgh, Pittsburgh PA, M.S.I.H., 1964
University of Michigan, Ann Arbor MI, H.S.I.H., 1970

PUBLICATIONS:

Journals

Clarke, N.P.; W.M. Wolfe, J.J. Gokelman, H.E. von Gierke, "Simulation of Aerospace Flight Acceleration and Dynamic Pressure Environments for Biodynamics Research," Journal of Spacecraft and Rockets. 4 June 1967.

Professional Reports

Gokelman, J.J.; "Industrial Hygiene Survey - Sumpter Smith, ANG Base, Birmingham AL," Prof. Report 72M-18, USAFEHL, McClellan AFB CA 95652.

Gokelman, J.J.; "Industrial Hygiene and Air Pollution Evaluation of Pacer Foam Operations," Prof. Report 73M-5, USAFEHL, McClellan AFB CA 95652.

Gokelman, J.J.; "Emissions Study, Plattsburgh AFB NY," Prof. Report 75M-13, USAFEHL, McClellan AFB CA 95652.

Gokelman, J.J.; E.C. Banner, "Investigation of OSHA Complaint, Hill AFB UT," Prof. Report 75M-14, USAFEHL, McClellan AFB CA 95652.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Diplomate - American Board of Industrial Hygiene
Member, Air Pollution Control Association
Member, American Industrial Hygiene Association

CERTIFICATIONS/REGISTRATIONS

Certified Industrial Hygienist, Comprehensive Practice, American Board of Industrial Hygiene

Registered Profession Engineer, Civil Engineering, State of California

Certified Safety Professional, Board of Certified Safety Professionals

EXPERIENCE

1972 - Present

Chief, Environmental Protection Engineering Division, USAF Environmental Health Laboratory, McClellan AFB CA. Supervise the operation of the Air Pollution field operations of the Laboratory.

1968 - 1971

AFIT, Graduate School, University of Michigan

1967 - 1968

Chief, Military Public Health Servicies, Cam Ranh Bay AFB, Vietnam

1964 - 1967

Bioenvironmental Engineer, Vibration and Impact Branch, 6570 AMRL, Wright-Patterson AFB OH

1963 - 1964

AFIT, Graduate School, University of Pittsburgh

1960 - 1963

Bioenvironmental Engineer, 851 Medical Group, Malmstrom AFB MT

NAME: John H. Pontier, Capt, USAF, BSC

PROFESSION: Sanitary Engineer

TITLE: Consulting Bioenvironmental Engineer

ADDRESS: USAF Environmental Health Laboratory, Kelly AFB TX 78241

EDUCATION: Grove City College, Pennsylvania - B.S. 1968
University of Oklahoma, Norman, Oklahoma - M.S. 1974

PUBLICATIONS:

None

PROFESSIONAL CERTIFICATION:

Professional Engineer, State of Texas, No. 38974

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

Member, National Society of Professional Engineers
Member, Texas Society of Professional Engineers

EXPERIENCE:

1975 to Present

Consulting Bioenvironmental Engineer (Sanitary), USAF Environmental Health Laboratory, Kelly AFB TX. Conduct and consult water pollution control surveys and studies. Prepared Environmental Impact Report, Proposed Relocation of Air Force Systems Command (AFSC).

1974 - 1975

Chief, Environmental Health Services, Udorn RTAFB, Thailand. Planned and implemented programs for environmental protection, industrial hygiene and public health. Performed sanitary engineering consultation. Supervised three environmental health technicians.

1972 - 1974

Graduate School, University of Oklahoma. Received M.S. degree in Civil Engineering. Research was a study of the effect of land use and water use on lake water quality.

1968 - 1972

Bioenvironmental Engineer, Keesler AFB MS. Planned, implemented and performed environmental protection, occupational health and public health surveys and studies. Supervised seven military public health and occupational medicine technicians.

1964 - 1968

Grove City College, Pennsylvania. Received B.S. degree in Mechanical Engineering.

NAME: Jerry T. Lang, Captain, USAF, BSC

PROFESSION: Medical Entomologist

TITLE: Consulting Environmental Entomologist

ADDRESS: USAF Environmental Health Laboratory
Kelly AFB TX 78241

EDUCATION: B.S., Zoology, Miami University, 1968
M.S., Entomology, The Ohio State University, 1970
Ph.D., Entomology, The Ohio State University, 1975

PUBLICATIONS:

Periodicals

Lang, J.T. and Treece, R.E. 1971. Sterility and longevity effects of Sterculia foetida oil on the face fly. J. Econ. Entomol. 64(2):455-457.

Lang, J.T. and Treece, R.E. 1972. Boric acid effects on face fly fecundity. J. Econ. Entomol. 65(3):741-746.

Lang, J.T. 1973. A preliminary study of the aquatic Diptera and other insects of Woodend Pond. Atlantic Naturalist 28(3):93-98.

Lang, J.T. and Foster, W.A. Is there a female sex pheromone in the mosquito, Culiseta inornata? Submitted for review.

Lang, J.T. and Foster, W.A. Contact sex pheromone in Culiseta inornata (Diptera: Culicidae). Submitted for review.

Theses

The effects of X-radiation and two chemosterilants on the face fly, Musca autumnalis (Diptera: Muscidae). M.S.

Contact sex pheromone in the mating behavior of Culiseta inornata. Ph.D.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

Entomological Society of America
American Mosquito Control Association
Animal Behavior Society
American Association for the Advancement of Science

PROFESSIONAL EXPERIENCE:

November 1975 - Present

Consulting Environmental Entomologist, USAF Environmental Health Laboratory, Kelly AFB TX.

September 1973 - November 1975

Graduate Research, Air Force Institute of Technology, The Ohio State University.

April 1970 - August 1973

Air Force Representative, Military Entomology Information Service.

PROFESSIONAL CERTIFICATION:

Registered Medical Entomologist, American Registry of Professional Entomologists.

HONORS AND AWARDS:

Research Assistantship, The Ohio State University, 1968-1970.

Joint Service Commendation Medal, 1974.

RESEARCH:

Muscoid fly control (in particular concerning the face fly) through use of the sterile male technique. Approach to this aspect of entomological research was to evaluate X-radiation and two unconventional and environmentally safe chemosterilants. A general and descriptive faunal study was conducted on the Diptera of a pond used in environmental education classes by the Audubon Naturalists Society of Washington, D.C. Recently interest has been directed towards pheromone production and other aspects of epigamic behavior in mosquitoes.

NAME: James Thomas Goodwin

DATE OF BIRTH: 25 November 1938

FAMILY STATUS: Married; two children

EDUCATION: B.S., Biology, Memphis State University, 1964
M.S., Entomology, University of Tennessee, 1965

Ph.D., Entomology, University of Tennessee, 1967

RESEARCH: Research efforts, including graduate studies, have been principally devoted to studies of the Tabanidae with special emphasis on the juvenile stages of eastern Nearctic fauna. Recently interest has shifted to the Neotropical fauna. Other research has centered on the fauna of Tennessee (Orthoptera, Odonata) and on the distribution and juvenile taxonomy of the Megaloptera of the eastern Nearctic.

PRIOR RESEARCH SUPPORT:

1. Non-service Fellowship from University of Tennessee, 1966-67.
2. Memphis State University Faculty Research Grant, 1968-69.
3. Same as 2, 1969-70.
4. Same as 2, 1970-71.

PROFESSIONAL EXPERIENCE:

1. Memphis State University, Memphis, Tennessee
   Associate Professor of Biology
   September, 1967 - May, 1974
2. U. S. Air Force
   Medical Entomologist
   June, 1974 - Present

PROFESSIONAL SOCIETIES:

1. Entomological Society of America
2. Georgia Entomological Society
3. Tennessee Academy of Science
4. Tennessee Entomological Society
5. American Mosquito Control Association
6. Florida Entomological Society

PUBLICATIONS (PERIODICALS):

1. An annotated list of the Tabanidae of Tennessee. J. Tennessee Acad. Sci. 41:114-115. 1966.

2. Additions to the list of Odonata from Tennessee. J. Tennessee Acad. Sci. 43:27. 1968.

3. The Gryllotalpidae and Tridactylidae (Orthoptera) of Tennessee. J. Tennessee Acad. Sci. 43:28-29. 1968.

4. Notes on the parasites of immature Tabanidae (Diptera) and descriptions of the larva and puparium of Carinosillus pravus (Diptera; Tachinidae). J. Tennessee Acad. Sci. 43:107-109. 1968.

5. The Tettigoniidae (Orthoptera) of Tennessee. J. Tennessee Acad. Sci. 44:76-84. 1969.

6. A range extension for the Mormon cricket. Anabrus simplex. Ann. Entomol. Soc. Amer. 63:623-624. 1970.

7. Notes on the biology of Merycomyia whitneyi (Diptera; Tabanidae) in South Carolina. Ann. Entomol. Soc. Amer. 64:1182-1183. 1971.

8. Immature stages of some eastern Nearctic Tabanidae (Diptera). I. Introduction and the genus Chrysops Meigen. J. Georgia Entomol. Soc. 7:98-109. 1972.

9. Immature stages of some eastern Nearctic Tabanidae (Diptera). 1973. II. The tribe Diachlorini. J. Georgia Entomol. Soc. 8:5-11.

10. Immature stage of some eastern Nearctic Tabanidae (Diptera). 1973. III. The genus Tabanus Linnaeus. J. Georgia Entomol. Soc. 8:82-89.

11. Immature stages of some eastern Nearctic Tabanidae (Diptera). 1973. IV. The genus Merycomyia. J. Tennessee Acad. Sci. 48:115-118.

12. A study of some immature Neotropical Tabanidae (Diptera). 1974. Ann. Entomol. Soc. Amer. 67:85-133.

13. Immature stages of some eastern Nearctic Tabanidae (Diptera). V. Stenotabanus (Aegialomyia) magnicallus (Stone). 1974 J. Tennessee Acad. Sci. 49:14-15.

14. The male of Tabanus exilipalpis (Diptera, Tabanidae) and brief notes on the female. 1974. Ann. Entomol. Soc. Amer. 67:295.

15. Notes on some "rare" eastern Nearctic Tabanidae (Diptera); state records and host-parasite relationship for other species. Florida Ent. IN PRESS.

16. Immature stages of some eastern Nearctic Tabanidae (Diptera). VI. Haematopota Meigen and Whitneyomyia Bequaert, plus other Tabanini. IN PRESS.

17. Immature stages of some eastern Nearctic Tabanidae (Diptera). VII. Additional species of Chrysops Meigen. IN PRESS.

18. Notes on the pupae of some Ethiopian species of Tabanidae (Diptera). Ann. Entomol. Soc. Amer. 69:311-316. 1976

19. Insects of the Phoenix Islands, Pacific Ocean. Submitted for review.

PUBLICATIONS (OTHER):

1. Laboratory Exercises in General Animal Biology. 1974 Burgess Publishing Company, Minneapolis, MN. xi + 185 pp. (Co-authored with James F. Payne).

TECHNICAL REPORTS:

1. The Effect of Ultra Low Volume Aerial Dispersal of Naled on an Aquatic Habitat, Robins AFB GA. USAF Environmental Health Lab, Kelly AFB TX. EHL(K) 74-25, October 1974.

2. Pesticide Analysis for Naled Robins AFB GA Aerial Spray. USAF Environmental Health Lab, Kelly AFB TX. Supplement of EHL(K) 74-25, December 1974.

3. Engineering and Biological Evaluation of Wastewater Treatment Practices at Reese AFB TX. USAF Environmental Health Lab, Kelly AFB TX. EHL(K) 76-3, April 1976.

ENVIRONMENTAL REPORTS:

1. Proposed Realignment of Air Force Communications Service and Related Missions. Vol. I. Richards-Gebaur AFB MD.
2. Ibid. Vol. II. Scott AFB IL.
3. Ibid. Vol. III. Pope AFB NC.
4. Ibid. Vol. IV. Tinker AFB OK.

NAME: Jerry W. Jackson, Capt, USAF, BSC

PROFESSION: Consulting Bioenvironmental Engineer, Air Quality and Industrial Hygiene.

TITLE: Chief, Special Studies Branch, Environmental Protection Engineering Division.

ADDRESS: USAF Environmental Health Laboratory, McClellan AFB CA 95652

EDUCATION:

University of Arizona, Tucson AZ, B.S.C.E., 1968.
University of Texas, Austin TX, M.S.E.H.E. Candidate 1976.

PUBLICATIONS:

Journals

Thomas, T.C.; Jackson, J.W.: "A Technique for Sampling 2,4-D; 2,4,5-T Herbicides from Air," Accepted for Publication, Bull. Environ. Contam. and Toxicol., 1975.

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Jackson, J.W.; "Emissions Study, Langley AFB VA," Prof. Report 73M-8, USAFEHL, McClellan AFB CA 95652.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

Diplomate - American Board of Industrial Hygiene.
Member, Air Pollution Control Association.
Member, California Society of Professional Engineers.

CERTIFICATIONS/REGISTRATIONS:

Certified Industrial Hygienist, Comprehensive Practice, American Board of Industrial Hygiene.

Registered Professional Engineer, Civil Engineering, State of California.

EXPERIENCE:

Chief, Special Studies Branch, Environmental Protection Engineering Division, USAF Environmental Health Laboratory, McClellan AFB CA. Develop and apply sampling and analytical methods for unique requirements in the field of air pollution and industrial hygiene.

1972 - 1973

AFIT, Graduate School, University of Texas. Course work completed and thesis in draft. Anticipate degree M.S.E.H.E. in June 1976. Masters research was a study of neutron activation analysis for trace metals in coal-fired power plant exhausts.

1969 - 1972

Chief, Bioenvironmental Engineering Services, Nellis AFB NV. Conducted industrial hygiene surveys of base industrial activities. Supervised an occupational health program, sanitation program, public health program and provided consultation to the Base Commander and Base Civil Engineer in matters relating to the bioenvironmental aspects of construction and operations.

1968 - 1969

Student, Bioenvironmental Engineering Course, School of Aerospace Medicine, Brooks AFB TX.

1966 - 1968

AFIT, Student, University of Arizona, School of Civil Engineering. Received a B.S. in Civil Engineering, 1968.

1960 - 1966

Enlisted, USAF, Medical Administrative Specialist.

NAME: William D. Christensen, Capt, USAF, BSC

PROFESSION: Industrial Hygienist

TITLE: Consulting Bioenvironmental Engineer

ADDRESS: USAF Environmental Health Laboratory,
McClellan AFB CA 95652

EDUCATION:

Lowell Technological Institute, Lowell MA., B.S. 1968.
University of Pittsburgh, Pittsburgh PA., M.S. 1974.

PUBLICATIONS: None

PROFESSIONAL CERTIFICATION:

Comprehensive Practice, Industrial Hygiene,
American Board of Industrial Hygiene.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

American Conference of Government Industrial Hygienists
American Industrial Hygiene Association
American Academy of Industrial Hygienists
Diplomate, American Board of Industrial Hygiene

EXPERIENCE:

1975 - Present

USAF Environmental Health Laboratory, McClellan AFB CA. Provide consultant engineering servicies in air pollution evaluation and control techniques and in industrial hygiene.

1974 - 1975

Chief, Environmental Health Services. Responsible for the management of the public health department including: occupational health, environmental pollution, and communicable diseases. Review technical drawings and provide recommendations to insure compliance with applicable health standards. Conduct surveys of chemical and physical hazards found in the industrial shops and surveys of potential air and water pollution sources. Evaluate survey results and consult with designers on possible engineering corrective measures. USAF Hospital, Korat AB Thailand.

1973 - 1974

University of Pittsburgh, Graduate School of Public Health, Pittsburgh PA. Master of Science Degree, Hygiene, 1974. Thesis: Size Selective Characteristics of Circular Inlets As A Function of Probe Bluntness and Sampling Velocity.

1968 - 1973

Bioenvironmental Engineer. Applied knowledge of engineering and biological sciences for health protection purposes. Conducted surveys and performed measurments to recognize chemical, physical and biological stress factors capable of producing sickness or impaired health in either the community or occupational environment. Management of environmental health programs. Supervised medical personnel and activities in environmental quality, occupational safety and health and public health matters. Established and maintained liaison with local, state, and federal agencies on matters involving criteria standards, performance specifications, and monitoring related to environmental quality and occupational health concerns. USAF Hospital, Hill AFB UT, and USAF Hospital, Plattsburgh AFB NY.

1964 - 1968

Lowell Technological Institute, Lowell MA. Bachelor of Science Degree in Chemical/Paper Engineering.

NAME: Edwin C. Banner III, Capt, USAF, BSC

PROFESSION: Industrial Hygienist, Environmental Engineer

TITLE: Consulting Bioenvironmental Engineer,
USAF Environmental Health Laboratory,
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EDUCATION:

Virginia Polytechnic Institute, Blacksburg VA, B.S., 1964.
Clemson University, Clemson SC, M.S., 1970.

PUBLICATIONS: None

PROFESSIONAL CERTIFICATION:

Engineering Aspects, Industrial Hygiene,
American Board of Industrial Hygiene.

Professional Engineer, State of Texas, No. 36573.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

American Industrial Hygiene Association.
American Conference of Governmental Industrial Hygienists.
American Academy of Industrial Hygienists.
Diplomate, American Board of Industrial Hygiene.

EXPERIENCE:

1975 - Present

Consulting Bioenvironmental Engineer, USAF Environmental Health Laboratory, McClellan AFB CA.

1972 - 1975

Bioenvironmental Engineer Instructor, USAF School of Aerospace Medicine, Brooks AFB TX.

1970 - 1972

Staff Bioenvironmental Engineer, Defense Intelligence Agency, Washington DC.

1969 - 1970

Master of science, Environmental Systems Engineering, Clemson University, Clemson SC.

1968 - 1969

Base Bioenvironmental Engineer, Andrews AFB MC.

1967 - 1968

Base Bioenvironmental Engineer, Korat AB, Thailand.

1965 - 1967

Base Bioenvironmental Engineer, Wurtsmith AFB MI.

II. COMPARATIVE ANALYSES OF PROBABLE IMPACTS OF PROPOSED ACTIONS AND VIABLE ALTERNATIVES

A. SUMMARY

1. Loring AFB ME

EARTH (AFERN 3.1)

Neither of the alternatives should generate adverse effects or significantly alter the fundamental physiographic, geological and soil characteristics and properties of the area. Surface and subsurface conditions should not be changed since construction projects are not involved under either alternative. The solid waste or refuse generated should decrease under the Proposed Action. The overall effect of this reduction should be minimal, and the useful life of sanitary landfills in the area should be extended slightly under the Proposed Action.

WATER (AFERN 3.2)

A decrease in water consumption and wastewater discharges on-base and in the civilian community is probable. No change of demands should be expected under Alternatives 1 or 2.

TABLE 1. ESTIMATED REDUCTION OF WATER/WASTEWATER FLOWS

	PROPOSED	ALTERNATIVE 1	ALTERNATIVE 2
WATER DEMAND (On-Base)	1.43 mgd	NO CHANGE	NO CHANGE
WATER DEMAND (Off-Base)	0.24 mgd		
WASTEWATER DEMAND (On-Base)	0.95 mgd		
WASTEWATER DEMAND (Off-Base)	0.16 mgd		

In summary, the effect on water quality should be favorable under the proposed action and unchanged under the alternatives. Water quality degradation is possible under Alternatives 1 and 2 because the on-base sewerage system is overloaded and in need of modification or repairs.

AIR (AFERN 3.3)

Air pollutant emissions from Loring AFB will be reduced approximately 87% by the proposed action (Table 2). Loring presently contributes approximately 4% of the pollutant emissions to the county in which it is located, Aroostook. This proposed action will reduce Loring AFB's contribution to about 0.5%. This reduction in emissions will have very little impact on regional air quality but may noticeably improve air quality in the immediate area of the base.

TABLE 2. ESTIMATED REDUCTION OF AIR POLLUTANT EMISSIONS

POLLUTANT	EMISSIONS (TONS/YEAR) PRESENT	PROPOSED*	ALTERNATIVE 1	ALTERNATIVE 2
Particulate	87	15	NO CHANGE	NO CHANGE
SO_x	275	50		
NO_x	411	68		
HC	667	61		
CO	967	124		
TOTAL	2407	318		

*Vehicular, residential heating and commerical heating emissions were reduced in direct proportion to manpower reduction (81%). Aircraft related emissions were reduced in direct proportion to decreased operational activity (92%).

BIOTIC ENVIRONMENT (AFERN 3.4)

No significant negative impact is anticipated as a result of reductions at Loring AFB (Proposed Action). To the contrary, this action is expected to exert a beneficial impact on the biota. Alternative 1 or 2 would result in no change at Loring AFB.

UTILITIES (AFERN 4.4.2)

Implementation of the proposed action should decrease utility demands in Aroostook County by approximately 12%. Only favorable impact is expected. Implementation of Alternatives 1 or 2 will not change demands.

HISTORICAL/ARCHEOLOGICAL SITES (AFERN 4.4.3.7.3)

No impact on sites of historical/archeological significance is expected.

2. Blytheville AFB AR

EARTH (AFERN 3.1)

Neither of the alternatives should generate adverse effects or significantly alter the fundamental physiographic, geological and soil characteristics and properties of the area. Surface and subsurface conditions should not be changed since construction projects are not involved under either alternative. The solid waste or refuse generated should decrease under Alternative 1. The overall effect of this reduction should be minimal, and the useful life of sanitary landfills in the area should be extended slightly under Alternative 1.

WATER (AFERN 3.2)

A decrease in water consumption and wastewater discharges on-base and in the civilian community is probable. The following reductions in water and wastewater flows should be expected.

TABLE 3. ESTIMATED REDUCTIONS OF WATER/WASTEWATER FLOWS

	PROPOSED	ALTERNATIVE 1	ALTERNATIVE 2
WATER DEMAND (On-Base)	NO CHANGE	0.70 mgd	NO CHANGE
WATER DEMAND (Off-Base)		0.45 mgd	
WASTEWATER DEMAND (On-Base)		0.72 mgd	
WASTEWATER DEMAND (Off-Base)		0.30 mgd	

In summary, the effect on water quality should be favorable if Blytheville AFB is closed.

AIR (AFERN 3.3)

Air pollutant emissions from Blytheville AFB will be eliminated by Alternative 1. Blytheville presently contributes approximately 5% of the pollutant emissions to the county in which it is located, Mississippi. The 5% reduction in emissions resulting from base closure will have very little impact on regional air quality but may noticeably improve air quality in the immediate area of the base.

TABLE 4. ESTIMATED REDUCTION OF AIR POLLUTANT EMISSIONS

POLLUTANT	EMISSIONS (TONS/YEAR)			
	PRESENT	PROPOSED	ALTERNATIVE 1	ALTERNATIVE 2
Particulate	34.	NO CHANGE	0	NO CHANGE
SO_x	23		0	
NO_x	144		0	
HC	458		0	
CO	994		0	
TOTAL	1653		0	

BIOTIC ENVIRONMENT (AFERN 3.4)

No significant negative impact is expected as a result of closure of Blytheville AFB (Alternative 1). To the contrary, this action is expected to exert a beneficial impact on the biota. The Proposed Action or Alternative 2 would result in no change at Blytheville AFB

UTILITIES (AFERN 4.4.2)

Implementation of the proposed action should not change utility consumption; however, electricity, natural gas and fuel oil supplies are now and should continue to be limited. No change in Blytheville's impact on utility consumption should occur, except under Alternative 1, where the impact should be favorable.

HISTORICAL/ARCHEOLOGICAL SITES (AFERN 4.4.3 7.3)

No impact on sites of historical/archeological significance is expected as a result of closure of Blytheville AFB (Alternative 1). The proposed action or Alternative 2 would result in no change at Blytheville AFB.

B. IMPACT ANALYSIS

1. Proposed Action:

a. Loring AFB ME

EARTH (AFERN 3.1)

Neither of the alternatives should generate adverse effects or significantly alter the fundamental physiographic, geological or soil characteristics and properties of the area. Surface and subsurface conditions should remain essentially the same since no construction projects are involved under either alternative. Erosion might be a factor, but since the proposed phasedown is to caretaker status, rather than closure, cantonment plantings will likely be maintained. Solid waste or refuse generated should decrease. The overall effect of this reduction should be minimal, and the useful life of sanitary landfills in the area should be extended slightly, except under the circumstance that the base remains open, in which case no material change is envisioned.

WATER (AFERN 3.2)

A decrease in demand on water supplies and a decrease in discharges of wastewaters on-base and in the civilian community is anticipated. The decreases on-base will result directly from the decrease in employee population, and the decreases in the civilian communities will result from the decrease in families residing in the area. Decreased demands caused by decreased industrial activity will be negligible.

Consumption of potable water is assumed at 150 gpcd for residents and 50 gpcd for nonresident employees. The decreased demand in the civilian community should be 0.24 mgd [(150 gpcd)(465 employees)(3.4 family members)]. The decreased demand on-base should be 1.43 mgd [(150 gpcd)(2750)(3.4)+ (50 gpcd)(465)].

Allowing 100 gpcd of domestic wastewater for residents and 30 gpcd for nonresidents, a decrease of 0.16 mgd is expected in the civilian community and 0.95 mgd on-base.

The effect of decreased demands on water supplies and water quality should be favorable. Especially in the case of the wastewater load on the Loring sewage treatment plant which is operating at capacity. The design flow is 1.25 mgd, while the average flow is 1.35 mgd. The reduced base population should reduce wastewater flow to below 0.40 mgd which should increase the operating efficiency of the plant and lessen the impact on the receiving waters.

AIR (AFERN 3.3)

A decrease in air pollutant emissions will result directly from reduced human and flying activities. Human and flying activities will be reduced approximately 80% and 90%, respectively. The resulting decrease in emissions will be approximately 87% (2407 tons/year versus 318).

The emissions inventory for Loring AFB is presented in Table 5. Expected emissions, should the proposed action occur, were obtained by reducing present emissions in direct proportion to the reduction in human and flying activities.

Present and expected emissions from Loring AFB were compared with Aroostook County emissions (Table 6) to determine the significance of Loring's contribution to the county. Loring's present contribution of approximately 4% will decrease to approximately 0.5% should the proposed action occur. This reduction in emissions will have beneficial effect on air quality.

BIOTIC ENVIRONMENT (AFERN 3.4)

The proposed reduction at Loring AFB, once initiated, can be accomplished in a relatively short timespan. However, the acitivities required to accomplish this action will differ from those of the normal operational routine. Should the degree of difference be great, a short-term negative impact on the biota might occur, but the degree of such impact should be very slight, and biotic recovery, if impact does occur, should be accomplished within a few months.

At Loring AFB, there are no major game or wildlife programs in being. Although nearly 6,280 acres of land are under multiple use management of natural resources and 5,020 acres of this are classed as commercial forest, this acreage in comparison with the surrounding region is not considered to include any unique habitat. No species of rare, threatened or endangered species are known to occur on base.

As a result of the proposed force and mission reductions, significant decreases in human activities and concomitant episodes of air and water pollution and episodes of habitat modification are projected. Such decreases should produce a beneficial impact on the biotic environment.

TABLE 5.

EMISSIONS INVENTORY
Loring AFB ME

Source Category	Emission (Tons/Year) Part.	SO_x	NO_x	HC	CO
I. Transportation					
A. Road Vehicles	2.4	1.0	22	53	399
B. Aircraft	14	17.0	86	434	505
C. Other	1.2	0.6	2.6	0.8	18.6
SUBTOTAL	18	19	111	488	923
II. Fuel Combustion					
A. Industry	12.3	47.3	14.8	3.7	6.2
B. Commercial/ Institutional	53.8	208.6	285.6	17.6	22.7
SUBTOTAL	66	256	300	21	29
III. Incineration	3.4	0.1	0.1	8.6	15.0
IV. Process	-	-	-	-	-
V. Evaporation and Miscellaneous	-	-	-	149	-
TOTAL	87	275	411	667	967

TABLE 6.

EMISSIONS INVENTORY
Aroostook Co., Maine

Source Category	Emission (Tons/Year) Part.	SO_x	NO_x	HC	CO
I. Transportation					
A. Road Vehicles	376	177	3759	4455	25144
B. Aircraft	215	42	114	523	693
C. Other	0	1	3	86	272
SUBTOTAL	591	220	3876	5064	26109
II. Fuel Combustion					
A. Industry	693	3907	961	55	66
B. Commercial/ Institutional	217	1771	730	32	109
C. Residential	340	499	277	187	247
SUBTOTAL	1250	6177	1968	274	422
III. Incineration	1098	52	285	1974	11412
IV. Process	209	0	0	0	0
V. Evaporation and Miscellaneous	86	0	19	717	661
TOTAL	3234	6448	6148	8030	38604

UTILITIES (AFERN 4.4.2)

The decrease in personnel and activities at Loring AFB will result in a decrease in demand for potable water and sewage treatment. Since utility consumption is directly proportional to an area's population, reduction in the population can be directly translated to decreased utility demand in the local community. Projected population decreases under this alternative are 12% in Aroostook County.

Aircraft fuel consumption, AGE fuel consumption, and electricity consumption are all expected to decrease at Loring AFB as a result of decreases in the number of aircraft and personnel. Since some existing structures will be vacated, the base heating and cooling load, and fuel oil consumption are expected to decrease significantly. The impact of reduced consumption is expected to be favorable.

HISTORICAL/ARCHEOLOGICAL SITES (AFERN 4.4.3.7.3)

There are no sites of historical/archeological significance on Loring AFB or within a 10-mile radius of the base.

b. Blytheville AFB AR

The proposed action would result in no change at Blytheville AFB.

2. Alternative 1

a. Loring AFB ME

This alternative action would result in no change at Loring AFB.

b. Blytheville AFB AR

EARTH (AFERN 3.1)

Neither of the alternatives should generate adverse effects or significantly alter the fundamental physiographic, geological, or soil characteristics and properties of the area. Surface and subsurface conditions should remain relatively unchanged since construction projects are not involved under either alternative. Natural vegetal cover in the area being extensive, erosion should not be a factor. Solid waste or refuse generation should decrease. The overall effect of the reduction should be minimal, and the useful life of sanitary landfills in the area should be extended slightly or remain unchanged.

WATER (AFERN 3.2)

A decrease in demand on water supplies and a decrease in discharges of wastewaters on-base and in the civilian community is anticipated. The decreases on-base will result directly from the decrease in employee population, and the decreases in the civilian communities will result from the decrease in families residing in the area. Decreased demands caused by decreased industrial activity will be negligible.

Consumption of potable water is assumed at 150 gpcd for residents and 50 gpcd for nonresident base employees. The demand on-base will decrease by approximately 0.70 mgd (the current usage). The decreased demand in the civilian community should be 0.45 mgd [(150 gpcd)(909 families)(3.3 family members)].

Allowing 100 gpcd of domestic wastewater for residents and 30 gpcd for nonresidents, a decrease of 0.72 mgd is expected on-base and 0.30 mgd in the civilian community.

The effect of decreased demands on water supplies and water quality should be favorable.

AIR (AFERN 3.3)

A decrease in air pollutant emissions will result directly from base closure. The emissions inventories for Blytheville and the county in which it is located are presented in Tables 7 and 8. Blytheville's present contribution of approximately 5% to the county will be eliminated by Alternative 1. This proposed action will have beneficial effect on air quality.

BIOTIC ENVIRONMENT (AFERN 3.4)

Closure of Blytheville AFB, once initiated, can be accomplished in a relatively short timespan. However, the activities required to accomplish closure will differ from those of the normal operational routine. Should the degree of difference be great, a short-term negative impact on the biota might occur, but the degree of such impact should be very slight, and biotic recovery, if impact does occur, should be accomplished within a few months.

At Blytheville AFB, there are no major game or wildlife programs in being. No forest acreage exists on base, and in comparison with the surrounding area there is no unique biotic habitat. Furthermore, there are no records of occurrence for any rare, threatened or endangered species on base property.

Following closure, the absence of human activities and concomitant episodes of air and water pollution and episodes of habitat modification should produce a beneficial impact on the biotic environment.

TABLE 7.

EMISSIONS INVENTORY
Blytheville AFB AR

	Source Category	Emission (Tons/Year) Part.	SO_x	NO_x	HC	CO
I.	Transportation					
	A. Road Vehicles	3.0	1.1	26.8	64.4	481.2
	B. Aircraft	17.8	15.9	83.8	365.5	449.0
	C. Other	9.7	.9	13.7	2.6	57.5
	SUBTOTAL	30.5	17.9	124.3	432.5	987.1
II.	Fuel Combustion					
	A. Industry	2.7	5.0	16.7	1.1	2.4
	B. Commercial/ Institutional	-	-	-	-	-
	C. Residential	.3	0	2.7	.2	.5
	SUBTOTAL	3.0	5.0	19.4	1.3	2.9
III.	Incineration	0	0	0	0	0
IV.	Process	-	-	-	-	-
V.	Evaporation Miscellaneous	.8	0	0	24.4	3.4
	TOTAL	34.3	22.9	143.7	458.?	994.0

TABLE 8.

EMISSIONS INVENTORY
Mississippi County AR (Blytheville)

Source Category	Part.	Emission (Tons/Year) SO_x	NO_x	HC	CO
I. Transportation					
A. Road Vehicles	310	204	3231	3253	19220
B. Other	13	17	127	187	534
SUBTOTAL	323	221	3358	3440	19754
II. Fuel Combustion					
A. Industry	11	78	33	1	2
B. Commercial/ Institutional	6	8	58	4	9
C. Residential	35	10	83	27	38
SUBTOTAL	52	96	174	32	49
III. Incineration	131	11	41	227	661
IV. Process	1423	0	0	7	0
V. Evaporation and Miscellaneous	77	0	16	624	557
TOTAL	2006	329	3588	4329	21020

UTILITIES (AFERN 4.4.2)

The decrease in personnel and activities at Blytheville AFB will result in a decrease in demand for potable water and sewage treatment. Since utility consumption is directly proportional to an area's population, reduction in the population can be directly translated to decreased utility demand in the local community. Projected population decreases under this alternative are 14% in Mississippi County.

Aircraft fuel consumption, AGE fuel consumption, and electricity consumption are all expected to decrease at Blytheville AFB as a result of decreases in the number of aircraft and personnel. Since existing structures will be vacated, the base heating and cooling load, and natural gas consumption are expected to decrease significantly. The impact should be favorable since a power shortage in the region is predicted and natural gas and fuel oil are limited.

HISTORICAL/ARCHEOLOGICAL SITES (AFERN 4.4.3.7.3)

There are no sites of historical/archeological significance on Blytheville AFB. Within a 10-mile radius an unknown number of Indian mounds exists. As far as is known, none of these are protected in any way, and local residents frequently dig for relics. At any rate, activities required to accomplish base closure will be essentially restricted to the base proper and should not impact on off-base sites.

3. Alternative 2

This alternative results in no action. Consequently, existing conditions at Loring AFB and Blytheville AFB would continue.

III. OTHER CATEGORIES

A. The Irreversible and Irretrievable Commitments of Resources:

The proposed action will result in the commitment of labor, material and energy resources devoted to the relocation effort which are considered to be irretrievably committed.

B. Unavoidable Adverse Effects and Mitigation Possibilities:

There are no known unavoidable adverse effects and mitigation possibilities.

C. Details of Unresolved Issues:

There are no known unresolved issues at this time.

D. Bibliographic References:

1. "Compilation of Air Pollutant Emmission Factors"; AP-42; U.S. Environmental Protection Agency, Research Triangle Park, NC; March 1975.

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