

ENVIRONMENTAL ASSESSMENT

DEMOLITION OF CENTRAL STEAM PLANT AND ASSOCIATED FACILITIES

FAIRCHILD AFB, WASHINGTON



U.S. AIR FORCE



**DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
FAIRCHILD AFB, WASHINGTON**

NOVEMBER 2003

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE NOV 2003		2. REPORT TYPE		3. DATES COVERED 00-00-2003 to 00-00-2003	
4. TITLE AND SUBTITLE Environmental Assessment: Demolition of Central Steam Plant and Associated Facilities at Fairchild Air Force Base, Washington				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Mobility Command, Fairchild AFB, WA, 99011				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Air Force is proposing to demolish the central steam plant (Bldg 2175) and associated facilities on Fairchild AFB. The action is needed to: increase safety and occupational health by eliminating unoccupied buildings and removing hazardous material reduce the amount of hazardous material on Fairchild AFB by demolishing buildings and removing debris; and improve overall base appearance and increase potential land use. Under the No Action Alternative, demolition of the central steam plant and associated facilities would not be accomplished, and these non-operational structures would remain in their current condition. Resources considered in the impact analysis were: air quality; noise hazardous wastes and hazardous materials; cultural resources; solid waste management; and environmental management. No significant impacts would result from implementation of the Proposed Action or the No Action Alternative.					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINDING OF NO SIGNIFICANT IMPACT
DEMOLITION OF CENTRAL STEAM PLANT AND ASSOCIATED FACILITIES
ON FAIRCHILD AIR FORCE BASE, WASHINGTON

AGENCY

Department of the Air Force, Fairchild Air Force Base (AFB), Washington.

BACKGROUND

The central steam plant and associated facilities were formerly used for heat on Fairchild AFB. The facilities are no longer operational because natural gas boilers were installed in individual buildings. Demolition of the central steam plant and associated facilities is needed in order to reduce safety hazards and improve land use on the site.

PROPOSED ACTION

The Air Force is proposing to demolish the central steam plant and associated facilities on Fairchild AFB. Structures to be demolished would include: coal-burning and ash-handling equipment within the central steam plant (Bldg 2175) including, but not limited to, coal pulverizers, weigh belt feeders, coal crusher with conveyor and dust collector, ash handling system, and steam-driven vacuum at the top of the steam plant; the spray dryer absorber (SDA)/baghouse steel structures, concrete exhaust stack, connecting piping between the steam plant and SDA/baghouse; all ash-handling equipment; ash slurry system equipment; and, all ancillary equipment within the facility. The Proposed Action would also result in the removal and reuse or recycling of 112 tons of pebble lime and the removal of an underground tank. No replacement structures would be constructed on the site. The land would be landscaped to match surrounding areas, and this site would become available for other uses.

ALTERNATIVE ACTION

The Air Force evaluated the alternative of retrofitting the central steam plant and has found that it is not feasible to convert this facility for other uses. This alternative was eliminated from further consideration.

NO ACTION ALTERNATIVE

Under the No Action Alternative, the central steam plant and associated buildings and equipment would remain intact at their current location. The No Action Alternative would result in no demolition activities or operational changes on Fairchild AFB.

SUMMARY OF FINDINGS

Pursuant to NEPA guidance, 32 CFR 989 (*Air Force Environmental Impact Analysis Process*), and other applicable regulations, the Air Force completed an environmental assessment (EA) of the potential environmental consequences of implementation of the proposed demolition of the central steam plant and associated facilities. The EA, which supports this Finding of No Significant Impact (FONSI), evaluated the No Action Alternative and Proposed Action.

EVALUATION OF THE NO ACTION ALTERNATIVE

No significant impacts occur from the continuation of baseline activities (No Action Alternative).

EVALUATION OF THE PROPOSED ACTION, FAIRCHILD AFB

Air Quality. The greatest increase for any of the criteria air pollutants will be 4.68 tons per year for particulate matter (PM₁₀), which would be equivalent to 0.0671 percent of the baseline PM₁₀ emissions within the air quality control region. These emissions do not exceed the threshold emissions limits, and a

formal conformity determination is not required. Air pollutant emissions from demolition of the central steam plant and associated facilities would not be considered significant.

Noise. Construction noise for demolition of the central steam plant and associated facilities may have short-term impact on personnel at the Base. During demolition activities, noise levels would increase in the immediate area. The demolition contractor would be responsible for ensuring that the exterior and interior noise level standard would not be exceeded during demolition activities, and the contractor would also determine if hearing protection is required in the work area. The impact from demolition noise will not be considered significant. Impacts to the noise environment as a result of the Proposed Action would not be considered significant.

Hazardous Wastes and Hazardous Materials. Hazardous wastes generated during demolition will be removed in accordance with the Fairchild AFB Hazardous Waste Management Plan and applicable regulatory requirements. The 112 tons of pebble lime will be containerized before being removed from the site and then either reused or recycled.

Biological Resources. Demolition activities will occur within developed, maintained areas with extant, highly modified and disturbed landscape, and will not substantially change habitat for plant or animal species. Demolition will not result in any impacts to threatened or endangered species that occur on Fairchild AFB. The Proposed Action will not be located near nesting areas for grasshopper sparrow, a Washington sensitive species. There are no wetlands located in the area of the central steam plant.

Cultural Resources. No known archaeological sites are located in the area of the central steam plant on Fairchild AFB. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during demolition. Demolition will be managed in accordance with the Fairchild AFB Integrated Cultural Resources Management Plan (ICRMP) that includes procedures that must be followed in the event of inadvertent discovery of cultural resources.

The central steam plant is not eligible for listing on the National Register of Historic Places (NRHP). The Proposed Action will not result in demolition or modifications to any historic properties or structures. The Proposed Action will not result in impacts to historical resources.

No Native American concerns have been identified for Fairchild AFB. The Proposed Action will be implemented in accordance with the Fairchild AFB ICRMP, which specifies notification procedures applicable to Native American groups. With compliance to the ICRMP, the Proposed Action will not result in impacts to Native American concerns.

Solid Waste Management. Demolition debris disposal will not exceed the capacity of the permitted, off-Base landfill. Solid waste generated by personnel will not change as a result of the Proposed Action. Impacts from solid waste disposal will not be considered significant.

Environmental Management. The Proposed Action will result in recycling and reuse of materials to reduce the amount of debris that will enter landfills. The Proposed Action will not be expected to result in the inability of the Base to achieve its Pollution Prevention goals. Asbestos-containing material (ACM) and lead-based paint (LBP) will be removed in accordance with existing guidance. Non-friable ACM will be abated before demolition activities. Demolition activities will be coordinated to ensure that demolition will avoid interference with any ongoing Environmental Restoration Program (ERP) investigation and remediation work and will not worsen the condition of any site.

ENVIRONMENTAL JUSTICE

Based on analysis conducted for this EA, it is determined that activities associated with the Proposed Action and No Action Alternative will not impose adverse environmental effects on adjacent populations. Therefore, no disproportionately high and adverse effects will occur to minority and low-income populations.

DECISION

Based on my review of the facts and analyses contained in the EA, I conclude that implementation of the Proposed Action will not have a significant impact either by itself or when considering cumulative impacts. Accordingly, requirements of the NEPA, regulations promulgated by the Council on Environmental Quality, and 32 CFR 989 are fulfilled and an environmental impact statement is not required.



RONALD R. DANIELS, Deputy Base Civil Engineer
Executive Secretary
Environmental Protection Committee
Fairchild Air Force Base, Washington

6 Nov 03

Date

THIS PAGE INTENTIONALLY LEFT BLANK

ENVIRONMENTAL ASSESSMENT
DEMOLITION OF CENTRAL STEAM PLANT
AND ASSOCIATED FACILITIES
FAIRCHILD AIR FORCE BASE, WASHINGTON

DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
FAIRCHILD AIR FORCE BASE, WASHINGTON

NOVEMBER 2003

PRIVACY ADVISORY NOTICE

Your comments on this draft Environmental Assessment are requested. Letters or other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided will be used only to identify your intention to make a statement during the public comment portion of any public meetings or hearings, or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

THIS PAGE INTENTIONALLY LEFT BLANK

1
2

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

1

2 **PRIVACY ADVISORY NOTICE 1**

3 **COVER SHEET CS-1**

4 **ACRONYMS AND ABBREVIATIONS v**

5 **CHAPTER 1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION 1-1**

6 1.1 Introduction 1-1

7 1.2 Need for the Action 1-1

8 1.3 Objective of the Action 1-1

9 1.4 Scope of the Environmental Review 1-1

10 1.5 Applicable Regulatory Requirements 1-6

11 1.6 Organization of the Document 1-7

12 **CHAPTER 2 DESCRIPTION OF THE ALTERNATIVES, INCLUDING THE**

13 **PROPOSED ACTION 2-1**

14 2.1 Introduction 2-1

15 2.2 Selection Criteria for Alternatives 2-1

16 2.3 Alternatives Considered, Including the No Action Alternative 2-1

17 2.3.1 Demolish Central Steam Plant and Associated Facilities (Proposed Action) .. 2-1

18 2.3.2 Refurbish Central Steam Plant (Alternative Action) 2-2

19 2.3.3 No Action Alternative 2-2

20 2.4 Description of Proposed Alternatives 2-2

21 2.4.1 Proposed Action 2-2

22 2.4.2 No Action Alternative 2-5

23 2.5 Description of Past and Reasonably Foreseeable Future Actions 2-5

24 2.6 Identification of the Preferred Alternative 2-6

25 2.7 Comparison of Environmental Effects of All Alternatives 2-6

26 **CHAPTER 3 DESCRIPTION OF THE AFFECTED ENVIRONMENT 3-1**

27 3.1 Mission 3-1

28 3.2 Noise 3-1

29 3.2.1 Background Information 3-1

30 3.2.2 Existing Noise Levels 3-1

31 3.3 Air Quality 3-2

32 3.3.1 Air Pollutants and Regulations 3-2

33 3.3.2 Regional Air Quality 3-3

34 3.3.3 Baseline Air Emissions 3-5

35 3.4 Hazardous Wastes and Hazardous Materials 3-5

1	3.5 Cultural Resources	3-6
2	3.5.1 Archaeological Resources	3-7
3	3.5.2 Historical Resources	3-7
4	3.5.3 Native American Concerns.....	3-7
5	3.6 Solid Waste Management	3-8
6	3.7 Environmental Management	3-8
7	3.7.1 Pollution Prevention	3-8
8	3.7.2 Asbestos.....	3-9
9	3.7.3 Lead-Based Paint.....	3-9
10	3.7.4 Environmental Restoration Program	3-9
11	CHAPTER 4 ENVIRONMENTAL CONSEQUENCES	4-1
12	4.1 Mission.....	4-1
13	4.2 Noise	4-1
14	4.2.1 Proposed Action	4-1
15	4.2.2 No Action Alternative	4-3
16	4.2.3 Cumulative Impacts.....	4-3
17	4.2.4 Mitigation	4-3
18	4.3 Air Quality	4-4
19	4.3.1 Proposed Action	4-4
20	4.3.2 No Action Alternative	4-6
21	4.3.3 Cumulative Impacts.....	4-6
22	4.3.4 Mitigation	4-7
23	4.4 Hazardous Wastes and Hazardous Materials	4-7
24	4.4.1 Proposed Action	4-7
25	4.4.2 No Action Alternative	4-8
26	4.4.3 Cumulative Impacts.....	4-8
27	4.4.4 Mitigation	4-8
28	4.5 Cultural Resources	4-8
29	4.5.1 Proposed Action	4-9
30	4.5.2 No Action Alternative	4-10
31	4.5.3 Cumulative Impacts.....	4-10
32	4.5.4 Mitigation	4-10
33	4.6 Solid Waste Management	4-10
34	4.6.1 Proposed Action	4-10
35	4.6.2 No Action Alternative	4-11

1	4.6.3	Cumulative Impacts	4-11
2	4.6.4	Mitigation	4-12
3	4.7	Environmental Management	4-12
4	4.7.1	Proposed Action	4-12
5	4.7.2	No Action Alternative	4-13
6	4.7.3	Cumulative Impacts	4-13
7	4.7.4	Mitigation	4-13
8	4.8	Unavoidable Adverse Impacts	4-13
9	4.8.1	Air Quality	4-13
10	4.8.2	Noise	4-14
11	4.8.3	Safety	4-14
12	4.8.4	Energy	4-14
13	4.9	Relationship Between Short-Term Uses and Enhancement of Long-Term	
14		Productivity	4-14
15	4.10	Irreversible and Irretrievable Commitment of Resources	4-14
16	4.10.1	Energy Resources	4-14
17	4.10.2	Human Resources	4-15
18	CHAPTER 5	LIST OF PREPARERS	5-1
19	CHAPTER 6	PERSONS AND AGENCIES CONSULTED	6-1
20	CHAPTER 7	REFERENCES	7-1
21			
22			
23	APPENDICES		
24	A	AIR FORCE FORM 813	
25			
26			

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

LIST OF FIGURES

Figure 1-1 Location Map, Fairchild AFB..... 1-3
Figure 2-1 Location of Central Steam Plant on Fairchild AFB 2-3

LIST OF TABLES

Table 2-1 Cumulative Projects, Fairchild AFB..... 2-6
Table 2-2 Summary of Environmental Impacts for the Proposed Action and
No Action Alternative..... 2-7
Table 3-1 National and State Ambient Air Quality Standards 3-4
Table 3-2 Baseline Air Emissions 3-5
Table 3-3 IRP Sites Near the Central Steam Plant on Fairchild AFB..... 3-10
Table 4-1 Heavy Equipment Noise Levels at 50 Feet..... 4-1
Table 4-2 Air Pollutant Emissions from the Proposed Action 4-5
Table 4-3 Air Pollutant Emissions for Cumulative Condition 4-7

1

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-containing materials
AFB	Air Force Base
AFI	Air Force Instruction
AHPA	Archeological and Historic Preservation Act
AI	The Asphalt Institute
AIRFA	American Indian Religious Freedom Act
AMC	Air Mobility Command
ANSI	American National Standards Institute
AOC	Area of Concern
APE	Area of Potential Effect
AQCR	Air Quality Control Region
ARPA	Archeological Resources Protection Act
AT/FP	Anti-Terrorism/Force Protection
AW	Airlift Wing
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES/CEV	Civil Engineering Squadron/Environmental Flight
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dB	Decibel
dBA	A-weighted decibel
DNL	Day-Night average sound Level
DoD	Department of Defense
E.O.	Executive Order
EA	Environmental Assessment
ECF	Entry Control Facility
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
ERP	Environmental Restoration Program
FONSI	Finding of No Significant Impact
FY	Fiscal year
FY02	Fiscal Year 2002
HQ AMC	Headquarters, Air Mobility Command
IC	Institutional Control(s)
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
lb	pound(s)
LBP	lead-based paint
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
NFA	No Further Action
NHPA	National Historic Preservation Act
NLR	Noise Level Reduction
NO	Nitric Oxide

NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NRHP	National Register of Historic Places
O ₃	Ozone
Pb	Lead
PM ₁₀	Particulate Matter
PVC	Plastic Vinyl Coating
RI/FS	Remedial Investigation/Feasibility Study
ROI	Region of Influence
SDA	Spray dryer absorber
SHPO	State Historic Preservation Office
SI-IRA	Site Investigation – Interim Remedial Action
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
SWPPP	Storm Water Pollution Protection Plan
TCE	trichloroethene
tpy	tons per year
TSP	Total Suspended Particulates
USAF	United States Air Force
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Forest and Wildlife Service
VdB	vibration level in terms of decibels
VOC	Volatile Organic Compounds

1

2

1 Federal Regulations [CFR] Sections 1500-1508) and 32 CFR 989 (*Air Force Environmental*
2 *Impact Analysis Process*), 15 Jul 99, and amended 28 Mar 01. These federal regulations
3 establish both the administrative process and substantive scope of the environmental impact
4 evaluation designed to ensure that deciding authorities have a proper understanding of the
5 potential environmental consequences of a contemplated course of action. The CEQ
6 regulations require that an environmental assessment (EA):

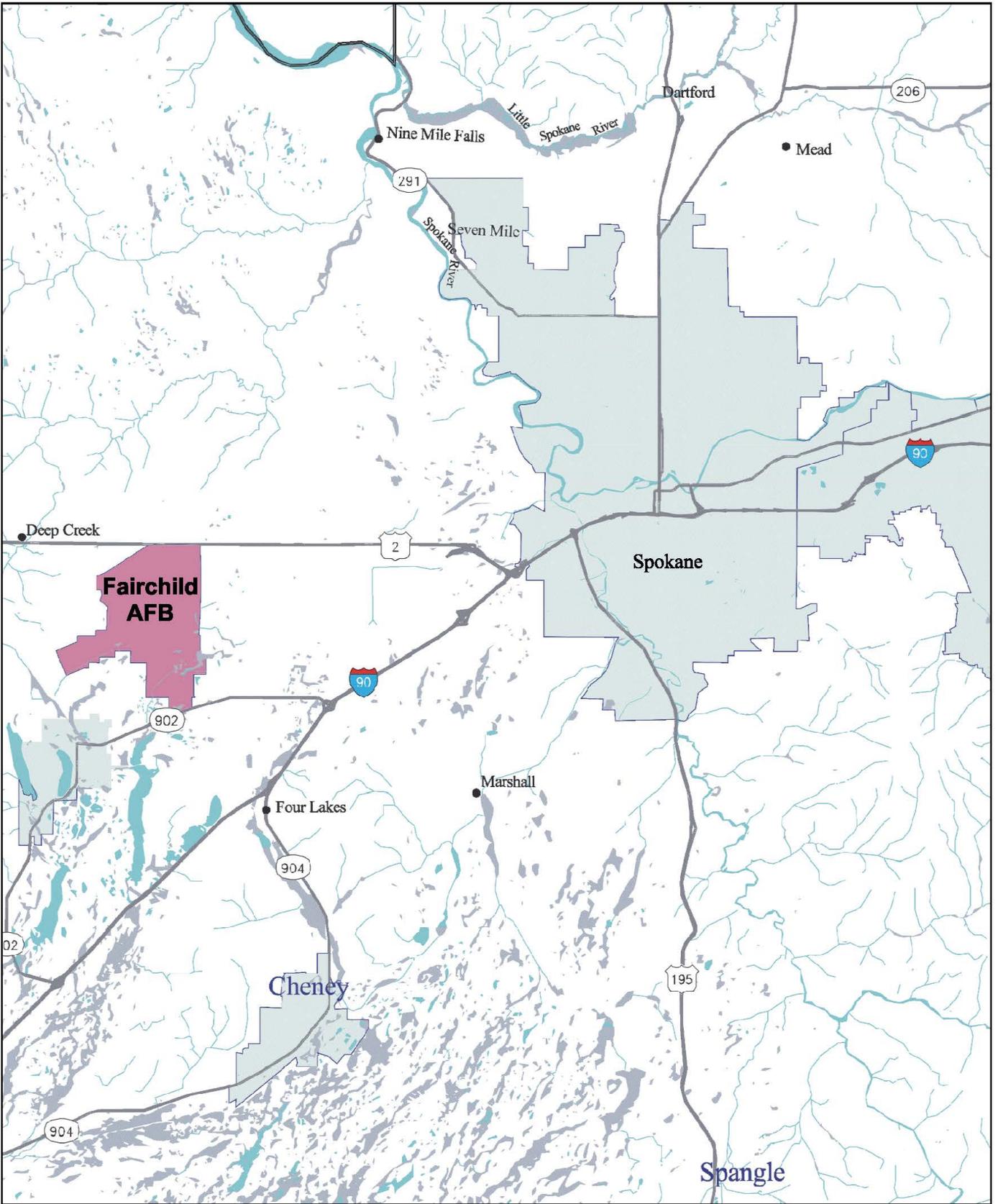
- 7 • Briefly provide evidence and analysis to determine whether the Proposed Action might
8 have significant effects that would require preparation of an environmental impact
9 statement (EIS). If analysis determines that the environmental effects would not be
10 significant, a finding of no significant impact (FONSI) will be prepared;
- 11 • Facilitate the preparation of an EIS, when required; or
- 12 • Aid an agency's compliance with NEPA when no environmental impact statement is
13 necessary.

14 The EA will assess the demolition of the proposed central steam plant and associated
15 facilities at Fairchild AFB. This EA identifies, describes, and evaluates the potential
16 environmental impacts that may result from implementation of the Proposed Action as well as
17 possible cumulative impacts from other reasonably foreseeable actions planned for the Base.
18 The EA also will identify required environmental permits relevant to the Proposed Action. As
19 appropriate, the affected environment and environmental consequences of the Proposed Action
20 and No Action Alternative may be described in terms of site-specific descriptions or regional
21 overview. Finally, the EA will identify mitigation measures to prevent or minimize
22 environmental impacts, if required.

23 The following biophysical resources will be assessed in the EA: air quality; noise;
24 hazardous waste; biological resources; cultural resources; infrastructure and utilities (solid
25 waste management); environmental management (asbestos and lead-based paint); and
26 environmental justice. The following resources are not evaluated in this EA (followed by a
27 rationale for not evaluating each subject):

28 **Geologic Resources.** No construction would be required for the Proposed Action. The
29 site of the central steam plant is located in a portion of the Base that has been disturbed and
30 altered by previous activities. Demolition of the facilities would not result in any substantial
31 changes to physiographic features. No changes in site elevation would be required and
32 alteration of ground surfaces would be minimal. Earthwork would be planned and conducted
33 in a manner to minimize duration of exposure of unprotected soils. Work would be conducted
34 in accordance with best management practices for erosion control. Landscaping of exposed
35 surfaces following completion of demolition would minimize the potential for erosion. For
36 these reasons, no geologic, physiographic, or soil impacts would be anticipated from the
37 proposed activities and soil resources are not assessed in this EA.

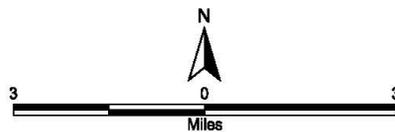
38



Fairchild Air Force Base



Washington



**Location Map
Fairchild AFB**

Figure 1-1

743337 FAIR-LOC.DWG

1
2
3

THIS PAGE INTENTIONALLY LEFT BLANK

1 **Biological Resources.** The site of the central steam plant is within the developed,
2 maintained area of the Base. The site is characterized by an extant, highly modified and
3 disturbed landscape. The Proposed Action would result in the loss of ruderal/non-native
4 grassland vegetation with low biological value. No construction would be required for the
5 Proposed Action. Demolition of structures on the site would not substantially change habitat
6 for plant or animal species. Demolition activities would not result in any impacts to threatened
7 or endangered species that occur on Fairchild AFB. There are no wetlands located in the area
8 of the central steam plant. For these reasons, no impacts to biological resources would be
9 anticipated from the proposed activities and biological resources are not assessed in this EA.

10 **Water Resources and Floodplains.** No water features are in or adjacent to the central
11 steam plant. The water table below the Base is 10 to 20 feet below ground surface, and none of
12 the demolition activity is anticipated to occur at this depth. None of the structures to be
13 demolished would be located within or adjacent to the 100- or 500-year floodplain (no
14 floodplains are located on Fairchild AFB). Standard erosion control measures to prevent storm
15 water pollution would be incorporated into facility demolition and design to minimize soil
16 disturbance, and prevent erosion and sedimentation, at the work site. Measures to prevent
17 discharge of contaminants into surface waters would be followed during demolition. For these
18 reasons, no surface water, groundwater, or floodplain impacts would be anticipated; therefore,
19 these resources are not assessed in this EA.

20 **Infrastructure and Utilities.** There would be no change in the number of personnel
21 authorizations at Fairchild AFB as a result of the proposed activities. Therefore, there would
22 be no long-term change in water consumption or wastewater generation from the current levels.
23 It is likely water would be applied for dust suppression during demolition. However, the
24 amount of area that would be affected by demolition would be small (approximately 4 acres
25 total) and water application would be limited during the approximate 12-month demolition
26 period (maximum). The amount of water that would be applied would be minor when
27 compared to current water system use and water application would not be long-term. The
28 storm water from the additional impervious cover would be minimal when compared to the
29 current storm water runoff at the Base. For these reasons, no water, wastewater, or storm water
30 system impacts would be anticipated.

31 During demolition, only a temporary and localized increase in demolition-related traffic
32 is expected. Impacts to transportation systems would not be considered significant. The
33 Proposed Action would result in no change to traffic on the Base because the central steam
34 plant is currently non-operational. For these reasons, the infrastructure and utilities assessed in
35 this EA is limited to solid waste management.

36 **Land Use.** Fairchild AFB is surrounded by agricultural land uses. No changes to
37 existing or future off-Base land use would result. The only change to on-Base land use would
38 be a conversion of industrial land into vacant/open space, which would be considered a
39 beneficial effect of the Proposed Action. The Proposed Action would not require the
40 acquisition of any private property. Demolition of the non-operational central steam plant and
41 associated facilities would be consistent with existing and future land use plans and programs

1 identified in the Fairchild AFB General Plan. For these reasons, land use is not assessed in this
2 EA.

3 **Safety and Health.** The proposed demolition of the central steam plant would not result
4 in any increase in safety or occupational health risks. The existing plant is not operational and
5 currently poses a minimal safety risk. Demolition of the facilities would be conducted in
6 accordance with applicable worker safety requirements. For these reasons, safety and health
7 are not assessed in this EA.

8 **Socioeconomic Resources.** There would be no change in the number of personnel
9 authorizations at Fairchild AFB as a result of the proposed activities. Thus, no long-term
10 changes would be anticipated to area population, housing requirements, school enrollment, or
11 economic factors (*i.e.*, sales volume, income, or employment). It is not anticipated that
12 demolition workers would relocate to the Spokane area as a result of the proposed activities.
13 Thus, there would be no short-term impacts to area population, housing requirements, or school
14 enrollment. No change to economic factors from the proposed demolition activities or long-
15 term operation would be expected. For these reasons, socioeconomic resources are not
16 assessed in this EA.

17 **Aesthetics.** Potential land use after demolition would be in accordance with the Fairchild
18 AFB Architectural Compatibility Guide that ensures aesthetic compatibility with objectives of
19 the Base General Plan. For these reasons, aesthetics is not assessed in this EA.

20 **Environmental Justice.** Executive Order 12898, *Federal Actions to Address*
21 *Environmental Justice in Minority Populations and Low-Income Populations*, was issued by
22 the President on February 11, 1994. The E.O. requires each federal agency to make achieving
23 environmental justice part of its mission by identifying and addressing, as appropriate,
24 disproportionately high and adverse human health or environmental effects of its programs,
25 policies, and activities on minority populations and low-income populations. Based on the
26 analysis conducted for this EA, it is determined that activities associated with the Proposed
27 Action and No Action Alternative would not impose adverse environmental effects on adjacent
28 populations. Therefore, no disproportionately high and adverse effects would occur to minority
29 and low-income populations.

30 Baseline conditions to be used for environmental evaluation in the EA are assumed to be
31 Fiscal Year 2002 (FY02). However, if FY02 data are not available, the most recent
32 information will be used. It is estimated that the Proposed Action would require approximately
33 12 months for completion.

34 **1.5 APPLICABLE REGULATORY REQUIREMENTS**

35 Numerous construction projects would be accomplished under either the Proposed
36 Action. The demolition contractor for the action would prepare and implement a Storm Water
37 Pollution Prevention Plan (SWPPP) to ensure compliance with Clean Water Act requirements
38 to ensure water quality is not degraded.

1 **1.6 ORGANIZATION OF THE DOCUMENT**

2 This EA is organized into seven chapters and one appendix.

3 *Chapter 1* Contains a statement of the need for the action; objectives for the action;
4 scope of the environmental review; presentation of the applicable regulatory requirements; and,
5 the organization of the EA.

6 *Chapter 2* Details the proposed alternatives; presents information on past and
7 reasonably foreseeable future actions; identifies the preferred alternative; and, summarizes the
8 environmental impacts for each alternative.

9 *Chapter 3* Contains a general description of the biophysical resources and baseline
10 conditions that potentially could be affected by the Proposed Action or No Action Alternative.

11 *Chapter 4* Describes the environmental consequences of the Proposed Action and
12 the No Action Alternative, identifies potential cumulative impacts and mitigation for impacts
13 determined to be significant.

14 *Chapter 5* Lists preparers of this document.

15 *Chapter 6* Lists the persons and agencies consulted during preparation of this EA.

16 *Chapter 7* Lists the sources of the information used in preparation of this EA.

17 *Appendix A* Air Force Form 813

18

1
2
3

THIS PAGE INTENTIONALLY LEFT BLANK

1 **2.3.2 Refurbish the Central Steam Plant (Alternative Action)**

2 The Air Force considered refurbishing the central steam plant and associated facilities
3 for other industrial uses. It was determined that the cost of refurbishing the facility would
4 exceed the cost of new construction. Because heating systems have already been installed at
5 other locations on the Base, it was determined that refurbishment would not be required at this
6 time. For this reason, this alternative was eliminated from further consideration.

7 **2.3.3 No Action Alternative**

8 The Air Force EIAP (32 CFR 989.8(d)) states: "...except in those rare instances where
9 excused by law, the Air Force must always consider and assess the environmental impacts of
10 the "no action" alternative. Under the No Action Alternative, Fairchild AFB would continue
11 to leave the central steam plant as a non-operational building, precluding the use of this site
12 for other purposes. The No Action Alternative would result in no demolition of the central
13 steam plant on Fairchild AFB.

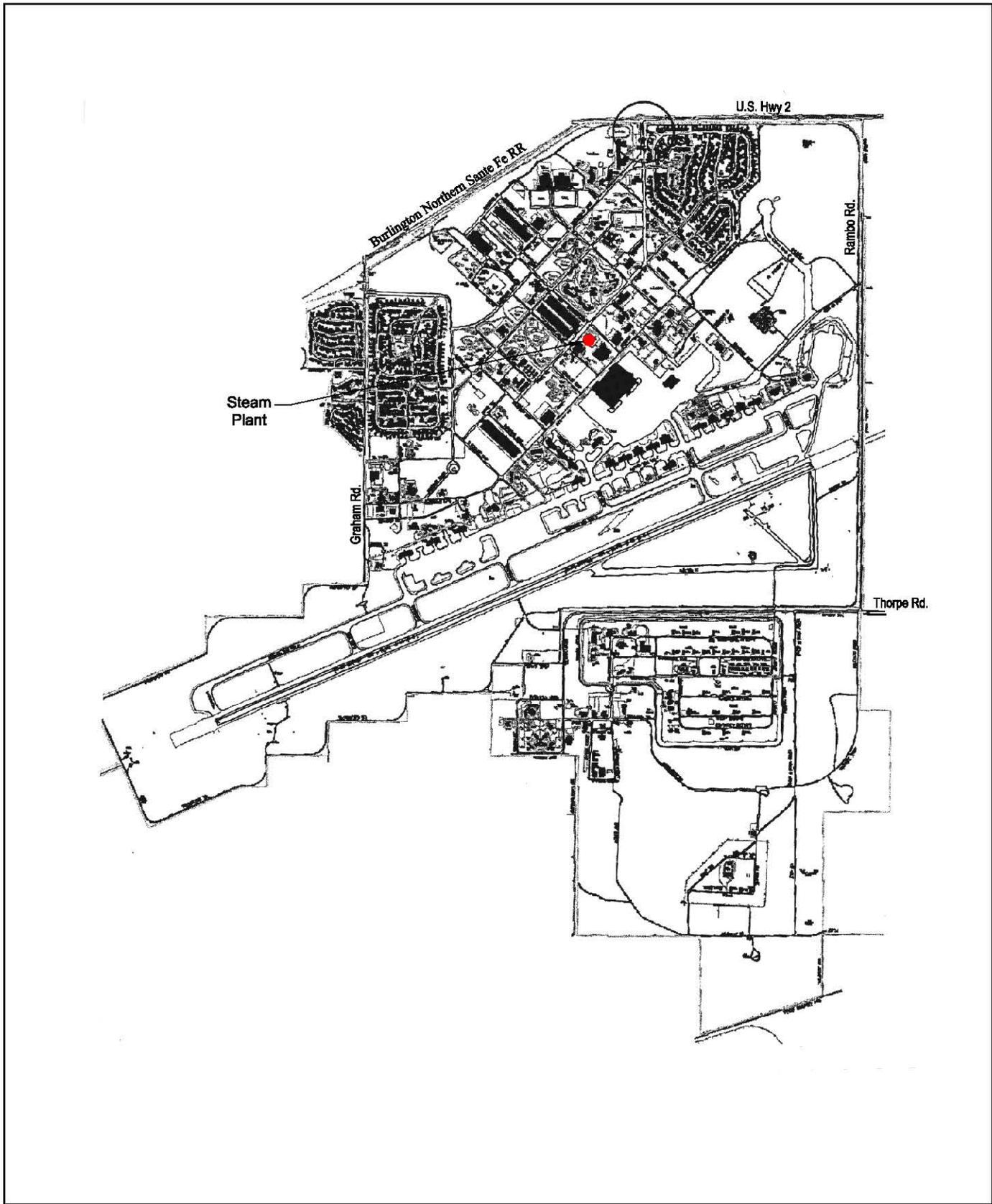
14 **2.4 DESCRIPTION OF PROPOSED ALTERNATIVES**

15 **2.4.1 Proposed Action**

16 The Air Force is proposing to demolish the central steam plant (Bldg 2175) and
17 associated facilities on Fairchild AFB. The central steam plant is located at the southwest
18 corner of West Bong Street and South Doolittle Avenue in the cantonment/industrial portion
19 of Fairchild AFB north of the flightline, as shown on Figure 2-1. Structures to be demolished
20 would include:

- 21 • Coal-burning and ash-handling equipment within the central steam plant (Bldg 2175)
22 including, but not limited to, coal pulverizers, weigh belt feeders, coal crusher with
23 conveyor and dust collector, ash handling system, and steam-driven vacuum at the top
24 of the steam plant;
- 25 • The spray dryer absorber (SDA)/baghouse steel structures, concrete exhaust stack,
26 connecting piping between the steam plant and SDA/baghouse; all ash-handling
27 equipment; and,
- 28 • Ash slurry system equipment; and, all ancillary equipment within the facility.

29 The Proposed Action would also result in the removal and reuse of 112 tons of pebble
30 lime and the removal of an underground tank. The pebbled lime is stored in a baghouse
31 outside the building, and would be containerized prior to removal from the building.
32 Removal of the tank would be conducted in accordance with Washington Administrative
33 Code (WAC) Chapter 173-360, Underground Storage Tank Regulations.

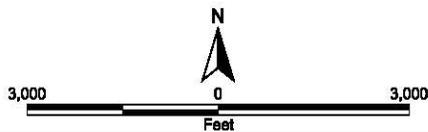


743337 FAIR-GATES.DWG

Fairchild Air Force Base

LEGEND

- Steam Plant



**Location of Steam Plant
on Fairchild AFB**

Figure 2-1

1
2

THIS PAGE INTENTIONALLY LEFT BLANK

1 Prior to demolition activities, the Air Force would conduct a physical survey for
2 asbestos-containing materials (ACM) and lead-based paint (LBP) on the site. Non-friable
3 ACM would be abated prior to demolition. Removal of ACM and LBP would be conducted
4 in accordance with applicable regulations and in compliance with the Asbestos Management
5 Plan and Lead Base-Paint Management Plan.

6 No replacement structures would be constructed on the site. The land would be
7 landscaped (i.e., dry land seeded) to match surrounding areas, and this site would become
8 available for other uses. Landscaping would be conducted in accordance with requirements
9 defined in the Landscaping Plan included in the Integrated Natural Resources Management
10 Plan for Fairchild AFB.

11 A total of 49,488 square feet of structures would be demolished. It is anticipated that
12 demolition at each building would occur sequentially. Demolition would include removal of
13 piping and associated infrastructure connections to existing buildings on the southern corner
14 of West Bong Street and South Doolittle Avenue. The asphalt parking lot for the existing
15 central steam plant would also be demolished. The total area to be cleared is approximately
16 four acres. Demolition activities, including clearing and landscaping, would be expected to
17 occur over a 12-month period.

18 The demolition contractor would be responsible for ensuring that noise levels do not
19 exceed applicable standards. The demolition contractor would be responsible for determining
20 if any hearing protection or other mitigation measures are required.

21 **2.4.2 No Action Alternative**

22 The No Action Alternative would result in no demolition of the central steam plant and
23 associated structures on Fairchild AFB. These existing structures would remain in their
24 current condition. The Air Force would be required to provide periodic inspection and
25 maintenance on these non-operational facilities that would remain in the Base inventory of
26 buildings. The No Action Alternative would preclude any improvements to land use or
27 aesthetic quality at this site.

28 **2.5 DESCRIPTION OF PAST AND REASONABLY FORESEEABLE FUTURE** 29 **ACTIONS**

30 Complete environmental impact analysis of the Proposed Action and alternatives must
31 consider cumulative impacts due to other actions. A cumulative impact, as defined by the
32 CEQ (40 CFR 1508.7), is the “impact on the environment which results from the incremental
33 impact of the action when added to other past, present, and reasonably foreseeable future
34 actions regardless of which agency (federal or non-federal) or person undertakes such actions.
35 Cumulative impacts can result from individually minor but collectively significant actions
36 taking place over a period of time.”

37 The Air Force has identified past and reasonably foreseeable actions that could occur on
38 Fairchild AFB. The only project that would occur during the same time period as the
39 Proposed Action is the anti-terrorism/force protection gate construction and improvements.

The construction projects that would support basing of the 767 aircraft at Fairchild AFB have not been identified at this time and would occur after the demolition period of the Proposed Action. These projects are identified in Table 2-1 and described herein.

Table 2-1 Cumulative Projects, Fairchild AFB

Project	Size (Square Feet)	Start Date	Duration
Demolish/Construct Elementary School	118,656	FY03	12 months
Add/Alter Main Gate	1,220	FY03	4 months
Anti-Terrorism/Force Protection Gate Improvements	665,844	FY03	36 months
767 Aircraft Basing Construction Projects	NA	FY06	36 months
Total	785,720	NA	NA

Note: Size depicts total surface area for the facility. Start date reflected as FY. NA=not available at this time.

Demo/Construct Elementary School. The Air Force is in the process of constructing a replacement elementary school near the Galena Station Housing Area on Fairchild AFB. Demolition of the elementary school southwest of the Main Gate would occur in FY03.

Add/Alter Main Gate. To improve safety and security of the Main Gate during increased security conditions, the Air Force is planning to construct a weather canopy and guard shelters at the Main Gate, and alter the inbound roadway to accommodate an additional lane. This project will include utilities, paving, communications and other site work. An EA and FONSI for this action were completed in 2002 (USAF 2002b).

Anti-Terrorism/Force Protection Gate Improvements. As part of the Air Force anti-terrorism/force protection initiative, roadway improvements and construction are planned for the Main Gate, Graham Gate, Rambo Gate and Gate 20 on Fairchild AFB. To further reduce traffic during morning peak period, the Air Force would also make improvements to signage, lighting, speed control and other design considerations such as tandem processing islands, vehicle arrest systems, and gate security systems.

767 Aircraft Basing Construction Projects. In support of the planned basing of up to thirty-two 767 aircraft at Fairchild AFB, facility construction projects in the flightline and operational support areas are planned.

2.6 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The preferred alternative is the Proposed Action, demolition of coal-burning and ash-handling equipment within the central steam plant (Bldg 2175).

2.7 COMPARISON OF ENVIRONMENTAL EFFECTS OF ALL ALTERNATIVES

Table 2-2 summarizes the environmental impacts of the Proposed Action and No Action Alternative.

Table 2-2 Summary of Environmental Impacts for the Proposed Action and No Action Alternative

Resource (Applicable Subchapter)	Proposed Action	No Action Alternative
Mission (4.1)	The Proposed Action would improve the Base's ability to accomplish its mission.	No change to the mission would result.
Noise (4.2)	Demolition noise may have a short-term impact. Temporary interior noise levels from 57 to 62 dB could annoy less than 15 percent of nearby persons and cause temporary disruption of speech during the noise event.	No significant impacts occur from baseline activities.
Air Quality (4.3)	The greatest increase of any of the criteria air pollutants would be 4.68 tons per year (tpy) for particulate matter (PM ₁₀), which equates to 0.0671 percent of the baseline PM ₁₀ emissions within the air quality control region (AQCR). These emissions are not considered significant, and an USEPA Conformity Determination would not be required.	No significant impacts occur from baseline activities
Hazardous Wastes and Hazardous Materials (4.4)	The contractor would comply with all regulatory guidance for the use and disposal of hazardous materials during demolition activities. The 112 tons of pebble lime would be reused or recycled.	No significant impacts occur from baseline activities
Cultural Resources (4.5)	<p>Archaeological Resources. No NRHP-eligible archaeological resources are located within or adjacent to the Proposed Action region of influence (ROI) for Fairchild AFB. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during demolition. The action would be managed in accordance with the Fairchild AFB ICRMP including procedures that must be followed in the event of inadvertent discovery of cultural resources.</p> <p>Historical Resources. The central steam plant (Bldg 2175) is not eligible for listing on the NRHP. The Proposed Action would not result in demolition or modifications to any historic properties or structures. The Proposed Action would not result in impacts to historical resources.</p> <p>Native American Concerns. No Native American concerns have been identified for Fairchild AFB. The Proposed Action would be implemented in accordance with the Fairchild AFB ICRMP, which specifies notification procedures applicable to Native American groups. With compliance to the ICRMP, the Proposed Action would not result in impacts to Native American concerns.</p>	No significant impacts occur from baseline activities

Table 2-2 Summary of Environmental Impacts for the Proposed Action and No Action Alternative (Cont'd)

Resource (Applicable Subchapter)	Proposed Action	No Action Alternative
Utilities and Infrastructure (4.6)	Solid Waste Management. Demolition debris disposal would not result in impacts to the remaining capacity of the permitted off-Base landfill. Solid waste generated by personnel would not change as a result of the Proposed Action. Impacts from solid waste disposal would not be considered significant.	No significant impacts occur from baseline activities
Environmental Management (4.7)	The activities associated with the Proposed Action would be accomplished in accordance with existing directives and would have minimal impact on achieving pollution prevention goals. Any negative impact will be offset by diverting, reusing, and recycling metals and as much debris as possible to minimize disposal of solid waste. The demolition contractor would be responsible for asbestos-containing material (ACM) and lead-based paint (LBP) removal, which would be accomplished in accordance with existing guidance. Facility demolition activities would be coordinated with the Base Environmental Flight and Bioenvironmental Engineering to ensure that demolition would avoid interference with any ongoing Environmental Restoration Program (ERP) investigation and remediation work and would not worsen the condition of any site.	No significant impacts occur from baseline activities

1 **CHAPTER 3**
2 **DESCRIPTION OF THE AFFECTED ENVIRONMENT**

3 **3.1 MISSION**

4 Fairchild AFB is home to the 92nd Air Refueling Wing whose mission is to provide
5 immediately responsive KC-135 air refueling and airlift support to the United States and
6 friendly forces. The mission of Fairchild AFB is to ensure the highest standards in safety,
7 training, and combat capability. Tenant organizations at Fairchild AFB include the 336th
8 Training Group, 36th Rescue Flight, 141st Air Refueling Wing and 2nd Support Squadron (Air
9 Combat Command).

10 **3.2 NOISE**

11 **3.2.1 Background Information**

12 Noise is defined as sound that is undesirable because it interferes with speech and
13 hearing, is intense enough to damage hearing, or is otherwise annoying. Noise levels often
14 change with time. To compare sound levels over different time periods, several descriptors
15 have been developed that take into account this time-varying nature. These descriptors are
16 used to assess and correlate the various effects of noise on humans.

17 Different sounds have different frequency contents. Because the human ear is not
18 equally sensitive to sound at all frequencies, a frequency-dependent adjustment, called
19 A-weighting and expressed as dBA, has been devised to measure sound similar to the way the
20 human hearing system responds. The adjustments in amplitude, established by the American
21 National Standards Institute (ANSI S1.4 1983), are applied to the frequency content of the
22 sound. For example, 65 dBA is equivalent to normal speech at a distance of 3 feet.

23 An outdoor day-night average sound level (DNL) of 75 dBA is considered the threshold
24 above which the risk of hearing loss is evaluated. Following guidelines recommended by the
25 Committee on Hearing, Bioacoustics, and Biomechanics, the average change in the threshold
26 of hearing for people exposed to DNL equal to or greater than 75 dBA was evaluated. Results
27 indicated that an average of 1 dBA hearing loss could be expected for people exposed to DNL
28 equal to or greater than 75 dBA. For the most sensitive 10 percent of the exposed population,
29 the maximum anticipated hearing loss would be 4 dBA. These hearing loss projections must
30 be considered conservative as calculations are based on an average daily outdoor exposure of
31 16 hours (7:00 a.m. to 10:00 p.m.) over a 40-year period. It is doubtful any individual would
32 spend this amount of time outdoors within the DNL equal to or greater than 75 dBA noise
33 exposure area (USAF 1997).

34 **3.2.2 Existing Noise Levels**

35 Aircraft operations are the primary source of noise at Fairchild AFB. Aircraft activities
36 include aircraft and aircraft maintenance operations. During periods of no flying activity,
37 noise results primarily from aircraft maintenance and shop operations, ground traffic

1 movement, occasional construction, and similar sources. This noise is almost entirely
2 restricted to the Base itself and is comparable to sounds that occur in typical communities. It
3 is during periods of aircraft ground or flight activity that the noise environment changes.

4 Ambient noise in the area of the central steam plant would range from approximately 50
5 dBA (quiet urban daytime) to about 70 dBA (noisy urban daytime) when aircraft operations
6 are not occurring. Interior noise levels in area buildings would be reduced by approximately
7 18 to 27 dB due to the noise level reduction (NLR) properties of the structures' construction
8 materials (USDOT 1992).

9 **3.3 AIR QUALITY**

10 **3.3.1 Air Pollutants and Regulations**

11 Air quality in any given region is measured by the concentration of various pollutants in
12 the atmosphere, typically expressed in units of parts per million (ppm) or in units of
13 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Air quality is not only determined by the types and
14 quantities of atmospheric pollutants, but also by surface topography, size of the air basin, and
15 by prevailing meteorological conditions.

16 The Clean Air Act (CAA), as amended in 1977 and 1990, provides the basis for
17 regulating air pollution to the atmosphere. Different provisions of the CAA apply depending
18 on where the source is located, which pollutants are being emitted, and in what amounts. The
19 CAA required the USEPA to establish ambient ceilings for certain criteria pollutants. These
20 criteria pollutants are usually referred to as the pollutants for which the USEPA has
21 established National Ambient Air Quality Standards (NAAQS). The ceilings were based on
22 the latest scientific information regarding the effects a pollutant may have on public health or
23 welfare. Subsequently, the USEPA promulgated regulations that set NAAQS. Two classes of
24 standards were established: primary and secondary. Primary standards define levels of air
25 quality necessary, with an adequate margin of safety, to protect public health, including the
26 health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary
27 standards define levels of air quality necessary to protect public welfare (e.g., decreased
28 visibility, damage to animals, crops, vegetation, wildlife, and buildings) from any known or
29 anticipated adverse effects of a pollutant.

30 Air quality standards are currently in place for six pollutants or "criteria" pollutants:
31 carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulfur oxides (SO_x, measured as
32 sulfur dioxide [SO₂]), lead (Pb), and particulate matter with an aerodynamic diameter less
33 than or equal to 10 micrometers (PM₁₀). There are many suspended particles in the
34 atmosphere with aerodynamic diameters larger than 10 micrometers. The collective of all
35 particle sizes is commonly referred to as total suspended particulates (TSP). TSP is defined
36 as particulate matter as measured by the methods outlined in 40 CFR Part 50, Appendix B.
37 The NAAQS are the cornerstone of the CAA. Although not directly enforceable, they are the
38 benchmark for the establishment of emission limitations by the states for the pollutants
39 USEPA determines may endanger public health or welfare.

1 Ozone (ground-level ozone), which is a major component of “smog,” is a secondary
2 pollutant formed in the atmosphere by photochemical reactions involving previously emitted
3 pollutants or precursors. Ozone precursors are mainly nitrogen oxides (NO_x) and volatile
4 organic compounds (VOCs). NO_x is the designation given to the group of all oxygenated
5 nitrogen species, including nitric oxide (NO), NO₂, nitrous oxide (N₂O), and others.
6 However, only NO, NO₂, and N₂O are found in appreciable quantities in the atmosphere.
7 VOCs are organic compounds (containing at least carbon and hydrogen) that participate in
8 photochemical reactions and include carbonaceous compounds except metallic carbonates,
9 metallic carbides, ammonium carbonate, carbon dioxide (CO₂), and carbonic acid. Some
10 VOCs are considered non-reactive under atmospheric conditions and include methane, ethane,
11 and several other organic compounds. Ozone is a secondary pollutant and is not directly
12 emitted from common emissions sources. Therefore, to control ozone in the atmosphere, the
13 effort is made to control NO_x and VOC emissions. For this reason, NO_x and VOCs emissions
14 are calculated and reported in emission inventories.

15 The CAA does not make the NAAQS directly enforceable. However, the Act does
16 require each state to promulgate a State Implementation Plan (SIP) that provides for
17 “implementation, maintenance, and enforcement” of the NAAQS in each Air Quality Control
18 Region (AQCR) in the state. The CAA also allows states to adopt air quality standards more
19 stringent than the federal standards.

20 The Washington Department of Ecology (WDOE) administers the state of Washington
21 pollution program under authority of Chapter 43.21A, Department of Ecology, Revised Code
22 of Washington. The Spokane County Air Pollution Control Agency (SCAPCA) has
23 regulatory authority for emissions in the Fairchild AFB area. Table 3-1 lists national and
24 Washington state ambient air quality standards.

25 **3.3.2 Regional Air Quality**

26 The fundamental method by which the USEPA tracks compliance with the NAAQS is
27 the designation of a particular region as “attainment” or “nonattainment”. Based on the
28 NAAQS, each state is divided into three types of areas for each of the criteria pollutants:

- 29 • areas that are in compliance with the NAAQS (attainment);
- 30 • areas that do not meet the ambient air quality standards (nonattainment); and,
- 31 • areas where a determination of attainment/nonattainment cannot be made due to a
32 lack of monitoring data (unclassifiable – treated as attainment until proven
33 otherwise).

1 **Table 3-1 National and State Ambient Air Quality Standards**

Criteria Pollutant	Averaging Time	Primary NAAQS ^{a,b,c}	Secondary NAAQS ^{a,b,d}	Washington Standards ^{a,b}
Carbon Monoxide	8-hour 1-hour	9 ppm (10 µg/m ³) 35 ppm (40 µg/m ³)	No standard No standard	9 ppm (10 µg/m ³) 35 ppm (40 µg/m ³)
Lead	Quarterly	1.5 µg/m ³	1.5 µg/m ³	1.5 µg/m ³
Nitrogen Dioxide	Annual	0.05 ppm (100 µg/m ³)	0.05 ppm (100 µg/m ³)	0.05 ppm (100 µg/m ³)
Ozone	1 hour ^e	0.12 ppm (235 µg/m ³)	0.12 ppm (235 µg/m ³)	0.12 ppm (235 µg/m ³)
PM ₁₀	Annual 24-hour	50 µg/m ³ 150 µg/m ³	50 µg/m ³ 150 µg/m ³	50 µg/m ³ 150 µg/m ³
Total Suspended Particulates	Annual 24-hour	No standard No standard	No standard No standard	60 µg/m ³ 150 µg/m ³
Sulfur Oxides (measured as SO ₂)	Annual 24-hour 3-hour 1-hour ^e 1-hour ^f	0.03 ppm (80 µg/m ³) 0.14 ppm (365 µg/m ³) No standard No standard No standard	No standard No standard 0.50 ppm (1,300 µg/m ³) No standard No standard	0.02 ppm (55 µg/m ³) 0.10 ppm (265 µg/m ³) No standard 0.25 ppm (660 µg/m ³) 0.40 ppm (1,050 µg/m ³)

2 PM₁₀ Particles with aerodynamic diameters less than or equal to a nominal 10 micrometers

3 ^a National and Washington state standards, other than those based on an annual or quarterly arithmetic mean, are not to be
4 exceeded more than once per year. The ozone standard is attained when the expected number of days per calendar year
5 with maximum hourly average concentrations above the standard is less than or equal to one.

6 ^b The NAAQS and Washington state standards are based on standard temperature and pressure of 25 degrees Celsius and
7 760 millimeters of mercury, respectively. Units of measurements are parts per million (ppm) and micrograms per cubic
8 meter (µg/m³).

9 ^c National Primary Standards: The levels of air quality necessary to protect the public health with an adequate margin
10 safety. Each state must attain the primary standards no later than three years after the state implementation plan is
11 approved by the USEPA.

12 ^d National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or
13 anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time"
14 after
15 the state implementation plan is approved by the USEPA.

16 ^e Not to be exceeded more than twice in seven consecutive days.

17 ^f Not to be exceeded more than once per year throughout the state of Washington and never to be exceeded within the
18 Spokane County Air Pollution Control Agency region.

19 Generally, areas in violation of one or more of the NAAQS are designated
20 nonattainment and must comply with stringent restrictions until all of the standards are met.
21 In the case of O₃, CO, and PM₁₀, USEPA divides nonattainment areas into different
22 categories, depending on the severity of the problem in each area. Each nonattainment
23 category has a separate deadline for attainment and a different set of control requirements
24 under the SIP. According to federal regulations (40 CFR 81.341), all 13 counties in the

1 AQCR 62 are nonattainment for PM₁₀, unclassifiable/attainment for CO and ozone, and
2 cannot be classified or better than national standards for NO₂ and SO₂.

3 The EPA General Conformity Rule (58 Federal Register 63214 [November 30, 1993]
4 and codified at 40 CFR Part 93, Subpart B) establishes a process for analyzing and
5 determining whether a proposed project in a nonattainment area conforms to the SIP and
6 federal standards.

7 **3.3.3 Baseline Air Emissions**

8 An air emissions inventory is an estimate of total mass emissions of pollutants
9 generated from a source or sources over a period of time, typically a year. Accurate air
10 emissions inventories are needed for estimating the relationship between emissions sources
11 and air quality. Quantities of air pollutants are generally measured in pounds (lb) per year or
12 tons per year (tpy). All emission sources may be categorized as either mobile or stationary
13 emission sources. Stationary emission sources may include boilers, generators, fueling
14 operations, industrial processes, and burning activities, among others. Mobile emission
15 sources typically include vehicle operations.

16 The calendar year (CY) 1999 air emissions inventory summary for the AQCR 62, which
17 includes reported permitted stationary and mobile air emission sources, is presented in
18 Table 3-2.

19 **Table 3-2 Baseline Air Emissions**

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	NO _x (tpy)	SO _x (tpy)	PM ₁₀ (tpy)
AQCR CY99 Totals	26,547	1,276	2,508	6,893	6,970

20 Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

21 Source: AIRData 2003.

22 **3.4 HAZARDOUS WASTES AND HAZARDOUS MATERIALS**

23 Unless otherwise exempted by Comprehensive Environmental Response, Compensation
24 and Liability Act (CERCLA) regulations, Resource Conservation and Recovery Act (RCRA),
25 Subtitle C (40 CFR Parts 260 through 270) regulations are administered by the USEPA and
26 are applicable to the management of hazardous wastes. Hazardous waste must be handled,
27 stored, transported, disposed, or recycled in accordance with these regulations.

28 The storage, handling, recycling, and disposal of hazardous wastes are subject to
29 regulations under the RCRA act of 1976 and its 1988 amendments. RCRA regulatory
30 authority has been delegated to the state by the USEPA. Fairchild AFB has a Hazardous
31 Waste Management Plan, which fulfills the requirements in Title 40, CFR Parts 260-270 and
32 the CCR, Title 22, Parts 66264.13 and 662268.7(a), which establishes procedures to achieve
33 and maintain regulatory compliance regarding accumulation, transportation, and disposal of
34 hazardous waste.

1 3.5 CULTURAL RESOURCES

2 Cultural resources include prehistoric and historical archaeological sites, buildings,
3 structures, districts, artifacts, objects, or any other physical evidence of human activity
4 considered important to a culture, subculture, or community for scientific, traditional, or
5 religious purposes. Pursuant to Section 106 of the National Historic Preservation Act
6 (NHPA) of 1966, as amended, and its implementing regulations at 36 CFR 800, federal
7 agencies must take into consideration the potential effect of an undertaking on "historic
8 properties," which refers to cultural resources listed in, or eligible for inclusion in, the
9 National Register of Historic Places (NRHP). Sites not yet evaluated are considered
10 potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory
11 consideration as nominated properties.

12 Numerous laws and regulations require federal agencies consider the effects of a
13 Proposed Action on cultural resources. These laws and regulations stipulate a process for
14 compliance, define the responsibilities of the federal agency proposing the action, and
15 prescribe the relationship between other involved agencies (e.g., State Offices of Historic
16 Preservation, the Advisory Council on Historic Preservation).

17 Only those potential historic properties determined to be significant under cultural
18 resource legislation are subject to protection or consideration by a federal agency. The quality
19 of significance is considered in terms of applicability of the NRHP criteria. Significant
20 cultural resources, either prehistoric or historic in age, are referred to as "historic properties."

21 Cultural resources on Air Force installations are managed in accordance with
22 environmental laws that include: AFI 32-7065, *Cultural Resources Management*; 32 CFR
23 989; Executive Order 11593 of 1971; National Historic Preservation Act of 1966, as
24 amended; Archaeological and Historic Preservation Act (AHPA) of 1974 (Public Law [PL]
25 93-291); the Archaeological Resources Protection Act (ARPA) of 1979 (PL 96-95); the
26 American Indian Religious Freedom Act (AIRFA) of 1978 (PL 95-341); and, the Native
27 American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601). In
28 addition, any proposed undertaking must comply with the State Historic Preservation Office
29 (SHPO) guidelines for the States of California, Nevada and Oregon.

30 For this analysis, the Region of Influence (ROI) is synonymous with the Area of
31 Potential Effect (APE), as defined by the NHPA. The ROI for the analysis of cultural
32 resources includes the area of proposed demolition of the central steam plant on Fairchild
33 AFB.

34 The identification of cultural resources potentially impacted by the Proposed Action
35 was accomplished by reviewing the 2001 Fairchild AFB Integrated Cultural Resources
36 Management Plan (ICRMP) (USAF 2001a).

1 **3.5.1 Archaeological Resources**

2 Archaeological resources are prehistoric or historic places where human activity has
3 measurably altered the earth or left deposits of physical remains. Archaeological resources
4 may include some surface deposits and below ground (subsurface) deposits. Prehistoric
5 archaeological resources may include village sites, campsites, lithic scatters, burials, hearths
6 (or hearth features), processing sites, caves, and rock shelters. Historical archaeological
7 resources may include farmsteads, roads, privies, trash deposits and/or middens.

8 Fairchild AFB was constructed on high, relatively rocky land that was reported to be
9 practically devoid of water. No settler activity is recorded for the Base. Only three houses
10 existed there in 1941 when the land was turned over to the military, and all three houses have
11 been removed. The probability is low that undisturbed, significant archaeological resources,
12 including human graves, will be discovered on Fairchild AFB during future construction
13 (USAF 2001a).

14 The Fairchild AFB ICRMP Update (USAF 2001a) does not identify any archaeological
15 sites on the Base. Two farmsteads, the Raymond Gee well, and the Silver Lake Water Canal
16 are not considered to be eligible for listing on the NRHP. Two prehistoric archaeological
17 sites have been registered with the Washington State Office of Archaeology and Historic
18 Preservation (OAHP). Both sites are located on outlying annexes and not on the main portion
19 of Fairchild AFB.

20 **3.5.2 Historical Resources**

21 For purposes of this analysis, historical resources include buildings and structures, and
22 other physical remains of historic significance that are present above the ground. Historical
23 resources date from the period of initial European contact in this area (*circa* A.D. 1770) and
24 extend into the present. They may include houses, homesteads, farmsteads (and associated
25 support structures or buildings), cabins, forts, schools, bridges, dams, logging sites, military
26 facilities, structures, or buildings, and items of a similar nature.

27 Historic buildings on Fairchild AFB include Military Era historical resources (World
28 War II-era structures, Vietnam War Era structures, and Cold War Era buildings). One WWII
29 and two Cold War buildings may be eligible for inclusion on the National Register of Historic
30 Places. The central steam plant (Bldg 2175), constructed in 1944, is a permanent building
31 associated with World War II. Bldg 2175 has extensive modification and no longer has the
32 integrity of form required for inclusion on the NRHP (USAF 2001a).

33 **3.5.3 Native American Concerns**

34 Two Native American tribes have been identified in the Fairchild AFB area: the
35 Spokane Tribal Business Council and the Coeur d'Alene Tribe. No sites or areas that are
36 considered important to these tribes have been identified on Fairchild AFB. The potential for
37 culturally significant sites appears to be low based on records that indicate lands on the Base
38 were not intensively used by Native Americans. The Fairchild AFB ICRMP indicates that the

1 Base will be consulting with both tribes to obtain information about any culturally significant
2 sites on the installation (USAF 2001a).

3 **3.6 SOLID WASTE MANAGEMENT**

4 Solid wastes include all waste materials that are neither hazardous nor toxic, and which
5 are normally disposed of by dumping or incineration, or are recycled or recovered. The
6 management of solid (non-hazardous) waste on Fairchild AFB includes the collection and
7 disposal of solid wastes and recyclable material. Demolition and inert wastes generated on
8 Fairchild AFB are transported to an off-Base landfill. Refuse is sent to a waste-to-energy
9 plant.

10 **3.7 ENVIRONMENTAL MANAGEMENT**

11 **3.7.1 Pollution Prevention**

12 The Air Force has taken a proactive and dynamic role in developing a pollution
13 prevention (P2) program to implement the regulatory mandates in the Pollution Prevention
14 Act of 1990; E.O. 12856, Federal Compliance with Right-to-Know Laws and Pollution
15 Prevention Requirements; E.O. 12873, Federal Acquisition, Recycling, and Waste Prevention;
16 and E.O. 12902 Energy Efficiency and Water Conservation at Federal Facilities. The Air
17 Force P2 Program incorporates the following principles in priority order:

- 18 • Generation of hazardous substances, pollutants, or contaminants would be reduced or
19 eliminated at the source whenever feasible (source reduction).
- 20 • Pollution that cannot be prevented would be recycled in an environmentally safe
21 manner.
- 22 • Disposal, or other releases to the environment, would be employed only as a last resort
23 and would be conducted in an environmentally safe manner, according to regulatory
24 guidance.

25 AFI 32-7080 provides directives for the Air Force P2 program. The AFI incorporates
26 by reference applicable federal, DoD, and Air Force level regulations and directives for
27 pollution prevention. Each installation incorporates the requirements of AFI 32-7080 into a
28 Pollution Prevention Management Action Plan (P2 MAP). The P2 MAP is used to manage
29 the actions needed to develop and execute an installation's P2 program. P2 MAPs are based
30 on recurring opportunity assessments designed to continually evaluate an installation's
31 success in achieving pollution prevention at the highest level in the hierarchy of action. The
32 P2 MAP incorporates management strategies for meeting the goals of the program elements
33 of the Air Force P2 program. These elements address reduction and elimination of ozone-
34 depleting substances (ODS), USEPA 17 industrial toxics, hazardous waste, solid waste,
35 recyclable materials, and energy conservation.

1 **3.7.2 Asbestos**

2 Since the 1950s, asbestos was commonly added to a variety of building materials,
3 including cement to enhance strength. Asbestos containing cement products generally contain
4 Portland cement, aggregate, and asbestos fibers. Asbestos cement products have many uses,
5 including use as pipes for water and wastewater utilities. Serious health effects associated
6 with exposure to airborne asbestos fibers include asbestosis, lung cancer, and mesothelioma.
7 Although the USEPA promulgated a ban on asbestos and phase out of its use in 1989, many
8 materials were being manufactured at that time. Therefore, without a specific cut-off date, the
9 only way to determine the presence or absence of asbestos is through proper sampling and
10 analysis.

11 Asbestos management at Air Force installations is established in AFI 32-1052, *Facility*
12 *Asbestos Management*. AFI 32-1052 incorporates by reference applicable requirements of 29
13 CFR 669 *et seq.*, 29 CFR 1910.1025, 29 CFR 1926.58, 40 CFR 61.140, Section 112 of the
14 CAA, and other applicable AFIs and DoDDs. AFI 32-1052 requires installations to develop
15 an asbestos management plan for the purpose of maintaining a permanent record of the
16 current status and condition of all asbestos-containing material (ACM) in the installation's
17 facility inventory and documenting all asbestos management efforts. In addition, the
18 instruction requires installations to develop an asbestos operating plan that details how the
19 installation would conduct asbestos-related projects. Asbestos is regulated by the USEPA
20 with the authority promulgated under the Occupational Safety and Health Act (OSHA), 29
21 USC §§ 669 *et seq.* Emissions of asbestos fibers to ambient air are regulated under Section
22 112 of the CAA.

23 **3.7.3 Lead-Based Paint**

24 The Residential Lead-Based Paint (LBP) Hazard Reduction Act of 1992, Subtitle B,
25 Section 408 (commonly called Title X), was passed by Congress on October 28, 1992, and
26 regulates the use and disposal of LBP at federal facilities. Federal agencies are required to
27 comply with all applicable federal, state, interstate, and local laws relating to LBP activities
28 and hazards.

29 LBP management at Air Force installations is established in the Air Force policy and
30 guidance on LBP in facilities. The policy incorporates by reference the requirements of 29
31 CFR 1910.1025, 29 CFR 1926, 40 CFR 50.12, 40 CFR 240 through 280, the CAA, PL 102-
32 550, and other applicable federal regulations. This policy requires each installation to develop
33 and implement a facility management plan for identifying, evaluating, managing, and abating
34 LBP hazards.

35 **3.7.4 Environmental Restoration Program**

36 The Air Force established the Installation Restoration Program (IRP) in 1983 to
37 identify, characterize, and evaluate past disposal sites and remediate contamination on its
38 installations as needed to control migration of contaminants and potential hazards to
39 ecological resources, human health, and the environment in accordance with CERCLA

1 requirements. The program has since been renamed the Environmental Restoration Program
 2 (ERP). This program has two parts: former IRP sites that are Environmental Restoration
 3 Account (ERA)–eligible; and, sites not eligible for ERA but eligible for Environmental
 4 Compliance (EC) funds.

5 A total of 37 IRP sites and two Areas of Concern (AOC) are present on Fairchild AFB.
 6 Two of the IRP sites are basewide sites. In addition to the basewide sites, there are four
 7 known IRP sites in the vicinity of the central steam plant (Bldg 2175), as summarized in
 8 Table 3-3.

9 **Table 3-3 IRP Sites Near the Central Steam Plant on Fairchild AFB**

Site	Location	Description	Record of Decision
SD-37	Basewide	Basewide Oil/Water Separators (RI/FS)	No
SS-39	Basewide	TCE Orphan Plumes (RI/FS)	No
ST-35	W. Bong St. and S. Foulois Ave.	Bldg 2165, Fuel Transfer Facility (SI-IRA)	No
SW-11	W. Bong St. and S. Foulois Ave	Disposal Area at Warrior Park (IC/NFA)	Yes
IS-3	S. Doolittle Ave. and W. Arnold St.	Reciprocating Engine Test Cell (IC/NFA)	Yes
AOC-1	E. Arnold St. south of central steam plant	Vehicle Maintenance Facility Bldg 2115 (RI/FS)	No

10 AOC Area of Concern
 11 IC Institutional Controls
 12 RI/FS Remedial Investigation/Feasibility Study
 13 NFA No Further Action Required
 14 SI-IRA Site Investigation – Interim Remedial Action

1 **CHAPTER 4**
 2 **ENVIRONMENTAL CONSEQUENCES**

3 **4.1 MISSION**

4 The activities associated with the Proposed Action would have no direct effect on the
 5 ability of the Base to accomplish its mission. Demolition and removal of the central steam
 6 plant would provide approximately four acres of vacant land that could become available for
 7 other use in the future.

8 **4.2 NOISE**

9 An environmental impact analysis related to noise includes the potential impacts on the
 10 local population. In considering the basis for evaluating significance of noise impacts, several
 11 items were examined, including: 1) the degree to which noise levels generated by
 12 construction and aircraft operation activities would be higher than the ambient noise levels; 2)
 13 the degree to which there would be annoyance and/or activity interference; and 3) the
 14 exposure of noise-sensitive receptors to noise levels above 65 dBA.

15 **4.2.1 Proposed Action**

16 **Demolition Noise.** Assuming that noise from the demolition equipment radiates
 17 equally in all directions, the sound intensity would diminish inversely as the square of the
 18 distance from the source increases. Table 4-1 shows the anticipated sound pressure levels at a
 19 distance of 50 feet for miscellaneous heavy equipment.

20 **Table 4-1 Heavy Equipment Noise Levels at 50 Feet**

Equipment Type	Number Used ¹	Generated Noise Levels, L _p (dB) ²
Bulldozer	1	88
Backhoe (rubber tire)	1	80
Jackhammer	1	92 ³
Hydraulic Driven Piston Ram	1	105 ⁴
Front Loader (rubber tire)	1	80
Crane	1	75
Roller	1	80
Flat Bed Truck (18 wheel)	1	75
Scraper	1	89

21 1 Estimated number in use at any time

22 2 L_p = sound pressure level

23 3 Parsons, 2003

24 4 USAF, 2003

25 dB = decibel

26 Source: CERL 1978

1 Demolition at the central steam plant and associated facilities would be accomplished as
2 a result of the Proposed Action. Equipment and vehicles involved in demolition and removal
3 of debris would generate the primary source of noise from these activities. Demolition noise
4 would be intermittent and short-term in duration. Typical noise levels generated by these
5 activities range from 75 to 105 dB at 50 feet from the source.

6 Outdoor noise from construction activity at an occupied building 50 feet from the noise
7 source could be as high as 75 to 105 dB (see Table 4-1). Noise levels of equipment shown in
8 Table 4-1 may increase as a result of reflection of noise within the walls surrounding the
9 steam plant. This noise level could increase by 3, 5 and 6 dB for one, two or three reflective
10 surfaces, respectively. The noise from construction would be intermittent and last only as
11 long as the specific equipment is in use.

12 Construction activities could result in temporary periods of vibration at the level of 79
13 and 112 VdB (vibration level in terms of decibel) from the jackhammer and hydraulic driven
14 piston ram, respectively, operating at a distance of 25 feet. The vibration levels would be
15 reduced at the rate of 9 VdB for each doubling of transmission distance. Suggested criteria
16 for office buildings is 75 VdB for greater than 70 events per day and 83 VdB for less than 70
17 events per day (USDOT, 1998). It is not expected that the vibration levels from demolition of
18 the steam plant would exceed these guidelines.

19 Bldg 2170 is within 50 feet of the south wall of the steam plant. The corresponding
20 interior noise levels during demolition would be reduced by approximately 18 to 27 dB due to
21 the NLR properties of the building's construction materials (USDOT, 1992). For Bldg 2170,
22 this noise reduction would be decreased by 5 dB assuming this building was constructed
23 before implementation of the 1978 Air Force NLR standard. This reduced level of noise
24 could annoy up to 52 percent of nearby persons and cause temporary disruption of speech
25 during the noise event. It is assumed that windows of Bldg 2170 would not be open during
26 demolition work.

27 The steam plant is located within 200 feet of dormitory facilities. The interior noise
28 levels of the dormitories may experience temporary periods of increased noise during the
29 demolition activities. The projected noise level would not be expected to exceed the interior
30 day-night averaged noise level (or L_{dn}) of 45 dB, a suggested criterion for interior noise
31 levels. While the noise levels shown on Table 4-1 are not based on averaged conditions,
32 interior noise levels would be decreased based on the distance to the dormitories. While
33 temporary annoyance may result, it is not expected that the DNL 75 dBA noise level standard
34 would be exceeded at the dormitory location. It is also not expected that the interior noise
35 level of 85 dBA would be exceeded during any 8-hour period.

36 The steam plant is also located in an area of occupied, industrial buildings and offices. The
37 Air Force time-weighted average (TWA) for noise levels are based on continuous noise
38 exposure limits of 85 and 90 dBA over an 8-hour period. The potential for hearing loss
39 involves direct exposure on a regular, continuing, long-term basis to noise levels above 85
40 dBA. As stated in Section 3.3.2, hearing loss projections are based on an average daily
41 outdoor exposure of 8 hours over a 40-year period. It is anticipated the demolition activities

1 would occur between 7:30 a.m. and 4:00 p.m., five days per week for the duration of the
2 project. Individuals would not be outdoors for the entire noise producing period. Under this
3 condition, persons would not be exposed to long-term and regular noise above 85 dB.
4 Therefore, nearby building occupants would not be expected to experience loss of hearing. .

5 The demolition contractor would be responsible for ensuring that noise levels do not
6 exceed applicable standards. The demolition contractor would be expected to utilize modern,
7 quieter demolition equipment with appropriate noise suppression design to reduce noise
8 levels. A temporary noise barrier would be installed, as required, to protect Base personnel at
9 the exterior of buildings. The demolition contractor would be responsible for determining if
10 any hearing protection or other mitigation measures are required.

11 The number and type of aircraft operations would not change under the Proposed
12 Action. Therefore, the primary source of noise at Fairchild AFB would continue to be from
13 aircraft and the noise contours would not change from existing conditions. It should be noted
14 that noise from flying activities would tend to mask the noise generated by construction
15 projects for the same exposure area. The perception would be that demolition noise likely
16 would not be discernible during periods of aircraft operations. However, there could be
17 periods of time during which construction or demolition noise could be discerned and provide
18 minor annoyance. This condition would occur when construction or demolition activity is
19 underway and flying activity is low.

20 **Operational Noise.** There would be no operation noise associated with the Proposed
21 Action because the central steam plant would be demolished and no replacement building
22 would be constructed on the site.

23 **4.2.2 No Action Alternative**

24 The central steam plant and associated facilities would not be demolished as a result of
25 the No Action Alternative. No demolition noise would result. The noise environment would
26 be the same as baseline conditions.

27 **4.2.3 Cumulative Impacts**

28 Cumulative noise impacts could result in the event that proposed AT/FP construction at
29 the Main Gate occurs at the same time as planned demolition of the central steam plant (Table
30 2-1). Impacts would not be considered significant because no residential units are located in
31 the vicinity of the Main Gate or near the central steam plant. Cumulative impacts would not
32 be expected as a result of demolition of the central steam plant because the distance between
33 this facility and Base gates is great enough that there would be no combination of construction
34 noise from the project sites.

35 **4.2.4 Mitigation**

36 Noise levels would be temporarily increased during the demolition activities associated
37 with the Proposed Action. Noise from the Proposed Action would not be considered a
38 significant impact. Mitigation measures would not be required for the Proposed Action.

1 **4.3 AIR QUALITY**

2 Impacts to air quality would be considered significant if a Federal action resulted in
3 violation of a NAAQS, resulted in annual emissions of a pollutant greater than 250 tons per
4 year (definition of a “major stationary source” in an attainment area as defined in 40 CFR
5 52.21(b)(1), or exceeded any significance criteria established by the Washington State
6 Implementation Plan.

7 **4.3.1 Proposed Action**

8 Fugitive dust from ground disturbing activities and combustion emissions from
9 demolition equipment would be generated as a result of the Proposed Action. Fugitive dust
10 would be generated from activities associated with site demolition, clearing, grading, fill
11 operations, and from vehicular traffic moving over the disturbed site. These emissions would
12 be greatest during the initial demolition activities and would vary from day to day depending
13 on the demolition phase, level of activity, and prevailing weather conditions.

14 The quantity of uncontrolled fugitive dust emissions from a demolition site is
15 proportional to the area of land being worked and the level of demolition activity. The
16 USEPA has estimated that uncontrolled fugitive dust emissions from ground-disturbing
17 activities would be emitted at a rate of 80 lbs of TSP per acre per day of disturbance (USEPA
18 1995). In a USEPA study of air sampling data at a distance of 50 meters downwind from
19 demolition activities, PM₁₀ emissions from various open dust sources were determined based
20 on the ratio of PM₁₀ to TSP sampling data. The average PM₁₀ to TSP ratios for top soil
21 removal, aggregate hauling, and cut and fill operations is reported as 0.27, 0.23, and 0.22,
22 respectively (USEPA 1988). Using 0.24 as the average ratio for purposes of analysis, the
23 emission factor for PM₁₀ dust emissions becomes 19.2 lbs per acre per day of disturbance.
24 Fugitive dust emissions from demolition activities would be generated primarily from
25 building dismemberment, debris loading, and debris hauling. The USEPA has established a
26 recommended emission factor of 0.011 lbs of PM₁₀ per square foot of demolished floor area.
27 This emission factor is based on air sampling data taken from the demolition of a mix of
28 commercial brick, concrete, and steel buildings (USEPA 1988).

29 The USEPA also assumes that 230 working days are available per year for construction
30 (accounting for weekends, weather, and holidays), and that only half of these working days
31 would result in uncontrolled fugitive dust emissions at the emitted rate described above
32 (USEPA 1995). The construction emissions presented in Table 4-2 include the estimated
33 annual PM₁₀ emissions associated with the Proposed Action at Fairchild AFB. These
34 emissions would produce slightly elevated short-term PM₁₀ ambient air concentrations. The
35 USEPA estimates that the effects of fugitive dust from construction activities would be
36 reduced significantly with an effective watering program. Watering the disturbed area of the
37 construction site twice per day with approximately 3,500 gallons per acre per day would
38 reduce TSP emissions as much as 50 percent (USEPA 1995). The lime pebbles would be
39 containerized prior to removal from the building to minimize the potential for generation of
40 lime dust during transportation for disposal.

1 **Table 4-2 Air Pollutant Emissions from the Proposed Action**

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO _x (tpy)	NO _x (tpy)	PM ₁₀ (tpy)
AQCR CY99 Totals ^a	26,547	1,276	6,893	2,508	6,970
Proposed Action Annual Demolition Emissions (max. annual emissions during 1-yr demolition period)	0.10	0.44	0.12	1.11	4.68
Project Emissions as Percent of AQCR Emissions (1-year demolition period)	0.0004%	0.0343%	0.0444%	0.0017%	0.0671%

2 a AIRData 2003

3 tpy tons per year

4 Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

5 Specific information describing the types of demolition equipment required for a
6 specific task, the hours the equipment is operated, and the operating conditions vary widely
7 from project to project. For purposes of analysis, these parameters were estimated using
8 established cost estimating methodologies for construction and experience with similar types
9 of construction projects (Means 1996). Combustive emissions from construction equipment
10 exhausts were estimated by using USEPA approved emissions factors for heavy-duty
11 diesel-powered construction equipment (USEPA 1985). The construction emissions
12 presented in Table 4-2 include the estimated annual emissions from construction equipment
13 exhaust associated with the Proposed Action at Fairchild AFB. As with fugitive dust
14 emissions, combustion emissions would produce slightly elevated air pollutant concentrations.
15 However, the effects would be temporary, fall off rapidly with distance from the proposed
16 demolition site, and would not result in any long-term impacts. Table 4-2 lists the annual
17 emissions and the annual percent of change when compared to the baseline for the Proposed
18 Action.

19 Table 4-2 shows estimated annual emissions from demolition equipment exhaust
20 associated with the Proposed Action at Fairchild AFB. Values on Table 4-2 reflect the
21 maximum annual estimated emissions during the proposed 1-year demolition period. As with
22 fugitive dust emissions, combustion emissions would produce slightly elevated air pollutant
23 concentrations. However, the effects would be temporary, fall off rapidly with distance from
24 the proposed demolition site, and would not result in any long-term impacts. Table 4-2 also
25 shows the annual percent of change when compared to the baseline for the Proposed Action.

26 Review of data in Table 4-2 indicates that the greatest increase in emissions from
27 demolition and construction activities would be PM₁₀ (4.68 tons), which equates to 0.0671
28 percent of the PM₁₀ emissions within the AQCR. The emissions would be temporary and
29 would be eliminated after completion of the activity. Emissions fall below the 10 percent
30 level that would be considered regionally significant by the USEPA. Therefore, the air
31 emission impacts from the demolition activities associated with the Proposed Action would
32 not be considered significant.

1 Based on the requirements outlined in the USEPA general conformity rule published in
2 58 Federal Register 63214 (November 30, 1993) and codified at 40 CFR Part 93, Subpart B
3 (for federal agencies), a conformity analysis is required to analyze whether the applicable
4 criteria air pollutant emissions associated with the project equal or exceed the threshold
5 emission limits that trigger the need to conduct a formal conformity determination. The intent
6 of the conformity rule is to encourage long range planning by evaluating air quality impacts
7 from federal actions before the projects are undertaken. This rule establishes an elaborate
8 process for analyzing and determining whether a proposed project in a nonattainment area
9 conforms to the SIP and federal standards. Fairchild AFB is located in an attainment area,
10 with the exception of PM₁₀. As shown on Table 4-2, PM₁₀, emissions from the Proposed
11 Action would fall below the 10 percent level that would be considered regionally significant
12 by the USEPA. For this reason, and a formal conformity determination is not required.

13 A new 8-hour standard for ozone has also been proposed. However, a federal court
14 blocked the implementation of the standard. Therefore, ozone is not analyzed.

15 **4.3.2 No Action Alternative**

16 Emissions would continue to be generated by Base activities such as aircraft operations
17 and other aircraft maintenance activities, as well as vehicle, boiler, generator, and fueling
18 operations, and industrial processes. It is anticipated the emissions from these activities
19 would continue at the levels generated under the baseline condition.

20 **4.3.3 Cumulative Impacts**

21 The Air Force proposes to conduct only one other construction project during the time
22 when the proposed construction associated with the demolition of the central steam plant on
23 Fairchild AFB would occur. This other project would be the anti-terrorism/force protection
24 gate improvements (with all gates being constructed in the same year as a worst-case
25 situation). For analysis purposes, the emissions from this project were combined with the
26 Proposed Action maximum annual emissions to represent the most conservative condition that
27 would occur in any one year for cumulative condition impacts. The methodology used to
28 calculate the emissions for the Proposed Action was used for the cumulative conditions.
29 Table 4-3 lists the annual emissions and the annual percent of change when compared to the
30 baseline for the Proposed Action cumulative condition.

31

Table 4-3 Air Pollutant Emissions for Cumulative Condition

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO _x (tpy)	NO _x (tpy)	PM ₁₀ (tpy)
AQCR CY99 Totals ^a	26,547	1,276	6,893	2,508	6,970
Proposed Action	0.10	0.44	0.12	1.11	4.68
Other Actions	2.17	0.32	0.12	1.08	11.10
Total Annual Emissions ^b	2.27	0.75	0.24	2.19	15.77
Cumulative Emissions at Fairchild AFB as Percent of AQCR Emissions	0.0086%	0.0590%	0.0035%	0.0874%	0.2263%

^a AIRData, 2003

^b Estimated emissions from Proposed Action (maximum one year emissions) and other action activities during the same year.

tpy tons per year

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

Review of the data in Table 4-3 indicates that the greatest increase in emissions from demolition and construction activities for either cumulative condition would be PM₁₀ (15.77 tons) under the Proposed or Alternative Action cumulative condition. The PM₁₀ emissions equate to 0.2263 percent of the PM₁₀ emissions within the AQCR. The emissions for cumulative conditions would be temporary and would cease after completion of the activity. Emissions for the cumulative condition fall below the 10 percent level that would be considered regionally significant by the USEPA. Therefore, the air emissions from the demolition activities associated with the Proposed Action when combined with other projects would not be considered significant.

4.3.4 Mitigation

Potential criteria pollutant emissions associated with the Proposed Action do not exceed significance criteria requirements. Therefore, no mitigative actions for improving the ambient air quality would be required. Although no mitigation measures are required, the Air Force would ensure that the best management practice of site watering for dust control is accomplished for demolition activities, as needed.

4.4 HAZARDOUS WASTES AND HAZARDOUS MATERIALS

4.4.1 Proposed Action

Hazardous wastes would be generated during demolition of the central steam plant and associated facilities. It is anticipated that the quantity of hazardous wastes generated during the demolition period would be negligible. The demolition contractor would maintain all records of all waste determinations, including appropriate results of analysis performed, substances and sample locations, date and time of collection, and other pertinent data as required by 40 CFR Parts 280, Section 74 and 40 CFR, Parts 262, Subpart D.

Before demolition of the central steam plant and associated facilities can begin, the contractor would be required to prepare a work plan and health and safety plan in the event

1 that contamination is encountered during excavation activities. The work plan and health and
2 safety plan would address measures for using field instruments capable of detecting
3 contaminants at harmful levels. In the event any contaminated soil is encountered, the
4 demolition contractor will be required to excavate, properly dispose any contaminated soil
5 and replace excavated soil with clean soil.

6 In the event of a spill of any amount or type of hazardous material or waste (including
7 petroleum products that may be used during demolition), the contractor would take immediate
8 action to contain and clean up the spill. Contractor spill clean up personnel would be trained
9 and certified to perform spill clean up. The contractor would be responsible for proper
10 characterization and disposal of any waste and clean up materials generated. All waste and
11 associated clean up material would be removed from the project site and transported and/or
12 stored in accordance with regulations until final disposal. All details concerning the spill
13 would be provided to the government. The contractor is responsible for restoring a spill site
14 to the condition prior to the spill or to an improved condition. With implementation of these
15 best management practices, impacts to hazardous wastes would not be expected.

16 The 112 tons of pebble lime currently stored at the central steam plant would be
17 removed from the site and reused (i.e., recycled). The removal of pebble lime would be
18 conducted in accordance with applicable procedures for management of hazardous materials.

19 **4.4.2 No Action Alternative**

20 Demolition of the central steam plant and associated facilities would not be
21 accomplished at Fairchild AFB as a result of the No Action Alternative. As a result, the 112
22 tons of pebble lime would continue to be stored at the central steam plant.

23 **4.4.3 Cumulative Impacts**

24 Hazardous wastes for other planned construction projects on Fairchild AFB would
25 continue to be managed under existing regulations and Base management plans. Thus, when
26 combining the other actions with the Proposed Action, no cumulative adverse impacts to
27 hazardous waste management would be anticipated for the cumulative condition.

28 **4.4.4 Mitigation**

29 No significant impacts to hazardous wastes have been identified. Therefore, no
30 mitigation measures would be required.

31 **4.5 CULTURAL RESOURCES**

32 An undertaking is considered to have an effect on a historic property when the
33 undertaking may alter characteristics of the property that may qualify the property for
34 inclusion in the NHRP. An effect is considered adverse when it diminishes the integrity of
35 the property's location, design, setting, materials, workmanship, feeling, or association.
36 Adverse effects on historic properties would include, but would not be limited to:

- 1 • physical destruction, damage, or alteration of all or part of the property;
- 2 • isolation of the property from or alteration of the character of the property's setting
- 3 when that character contributes to the property's qualification for the National
- 4 Register;
- 5 • introduction of visual, audible, or atmospheric elements that are out of character with
- 6 the property or alter its setting;
- 7 • neglect of a property resulting in its deterioration or destruction; and
- 8 • transfer, lease, or sale of the property (36 CFR 800.9[b]).

9 Any ground-disturbing action in the area of an NRHP-eligible or potentially eligible
10 archaeological site, or modification to such a site, can affect the integrity of that cultural
11 resource, resulting in alteration or destruction of those characteristics or qualities which make
12 it significant and potentially eligible for inclusion in the NRHP. While archaeological sites or
13 historic buildings or structures can be destroyed during a single event, more often it is the
14 cumulative effect of recurrent disturbing actions that diminish the integrity of the cultural
15 resource and its significant characteristics.

16 **4.5.1 Proposed Action**

17 **Archaeological Resources.** No NRHP-eligible archaeological resources are located
18 within or adjacent to the ROI for Fairchild AFB. The probability is low that undisturbed,
19 significant archaeological resources, including human graves, will be discovered on Fairchild
20 AFB during future construction (USAF 2001a). The Proposed Action would not be expected
21 to result in any effects to archaeological resources on Fairchild AFB.

22 The Fairchild AFB ICRMP sets forth standard procedures that must be followed in the
23 event any type of archaeological site is discovered during the course of any earth-disturbing
24 activity of the Base. In the event previously undetected archaeological resources or human
25 remains are discovered during project activities, the demolition contractor or responsible
26 individual would be required to stop demolition activities in the affected area (and a
27 reasonable buffer exclusionary area) and contact the Security Forces Commander, and the
28 92 CES/CEV Cultural/Natural Resources Manager, who will take steps to minimize impacts
29 to the resource. Procedures to follow must be in accordance with Section 6.8.2 (*Procedures*
30 *to be Followed if Any Type of Archaeological Site is Discovered*) of the ICRMP for Fairchild
31 AFB. Any unknown site or other cultural remains inadvertently discovered must be assumed
32 to be potentially eligible for NRHP listing.

33 **Historical Resources.** The central steam plant (Bldg 2175) is not eligible for inclusion
34 on the NRHP. The Proposed Action would not result in demolition or modifications to any
35 historic properties or structures. The Proposed Action would not result in impacts to
36 historical resources.

37 **Native American Concerns.** No Native American concerns have been identified for
38 Fairchild AFB. The Proposed Action would be implemented in accordance with the Fairchild
39 AFB ICRMP, which specifies notification procedures applicable to Native American groups.

1 With compliance to the ICRMP, the Proposed Action would not result in impacts to Native
2 American concerns.

3 **4.5.2 No Action Alternative**

4 Demolition of the central steam plant would not be accomplished at Fairchild AFB as a
5 result of the No Action Alternative. However, facilities construction typical of that in
6 previous years likely would occur as part of the Base's overall facilities modernization plan.
7 Cultural resources would continue to be managed under existing regulations and the Base's
8 ICRMP. The No Action Alternative would not result in impacts to cultural resources

9 **4.5.3 Cumulative Impacts**

10 As with the Proposed Action, no NRHP-eligible archaeological or historical resources
11 are found within the ROI for the other actions. Cultural resources would continue to be
12 managed under existing regulations and the Fairchild AFB ICRMP. Thus, when combining
13 the other actions with the Proposed Action, no cumulative adverse cultural resources effects,
14 including visual, would be anticipated under the cumulative condition.

15 **4.5.4 Mitigation**

16 No significant archaeological and historical resources effects have been identified.
17 Therefore, no mitigation measures would be required.

18 **4.6 SOLID WASTE MANAGEMENT**

19 Impacts to the solid waste management would be considered significant if the federal
20 action substantially increased the demands on systems, resulting in the need for additional
21 capacity or new facilities.

22 **4.6.1 Proposed Action**

23 In considering the basis for evaluating the significance of impacts on solid waste,
24 several items were considered. These items include evaluating the degree to which the
25 Proposed Action waste generation could affect the existing solid waste management program
26 and the capacity of the area landfill. Analysis of the impacts associated with the proposed
27 demolition of the central steam plant and associated facilities is based on the following
28 assumptions:

- 29 • The weight of concrete debris is 150 lb/ft³ (Merritt 1976);
- 30 • The weight of asphaltic concrete roadways is 130 lb/ft³ (AI 1983);
- 31 • Approximately 4 pounds of demolition debris is generated for each square foot of
32 floor area for new structures (Davis 1995);
- 33 • Approximately 92 pounds of demolition debris is generated for each square foot of
34 floor area of demolished structures (USACE 1976);

- 1 • Approximately 96 pounds of demolition and construction debris are generated for each
2 square foot of floor area of renovated structures;
- 3 • Approximately 1 pound of construction debris is generated for each square foot of new
4 asphaltic concrete pavement;

5 Under the Proposed Action, there would be no change in the number of personnel
6 residing or working on Base. Thus, there would be no change in solid waste generated by Air
7 Force active duty, reserve, and civilian personnel. The volume of municipal waste
8 transported to the waste-to-energy plant would continue at the same rate as the baseline
9 condition.

10 Type IV solid waste would be generated from implementation of the Proposed Action.
11 These wastes would consist of building debris and demolition materials such as concrete,
12 metals (i.e., roofing, reinforcement bars, conduit, and piping), fiberglass (i.e., roofing
13 materials and insulation), cardboard, plastics (PVC piping, packaging material, and shrink
14 wrap), and lumber. These materials would either be recycled or be placed in the appropriate
15 construction materials landfill. These wastes would be in excess of the solid municipal wastes
16 generated by Base personnel.

17 With implementation of the Proposed Action, approximately 49,488 square feet of
18 buildings and structures would be demolished. Approximately 2,276 tons of solid waste
19 would be generated by demolition of the central steam plant and associated facilities. The
20 exact amount of debris that would be disposed of in a landfill is unknown because the
21 contractor will recycle material to the maximum extent. Demolition and inert wastes
22 generated by the Proposed Action would be transported to an off-Base landfill that is
23 permitted to accommodate planned waste disposal. Refuse would continue to be sent to a
24 waste-to-energy plant. In addition to the 2,276 tons of solid waste, 112 tons of pebble lime
25 would be recycled or reused. Impacts to solid waste management would not be expected.

26 **4.6.2 No Action Alternative**

27 Demolition of the central steam plant and associated facilities at Fairchild AFB would
28 not be accomplished as a result of the No Action Alternative. Solid waste generation would
29 continue at the levels experienced under the current conditions.

30 **4.6.3 Cumulative Impacts**

31 It is estimated that 2,394 tons of debris would be generated by other actions at Fairchild
32 AFB that could occur at the same time as the Proposed Action. When combined with solid
33 waste from the Proposed Action, the total amount of solid waste would be approximately
34 4,670 tons during the year when demolition of the central steam plant would occur. Disposal
35 of demolition and construction debris from the Proposed Action and other actions would
36 increase the disposal rate at the off-Base landfill over a one-year period. The contractor for
37 demolition of the central steam plant would recycle materials to the maximum extent possible,
38 thereby reducing the amount of construction and demolition debris disposed in the landfill.
39 Demolition debris from the Proposed Action, when combined with construction debris from

1 other actions, would continue to be disposed at a permitted landfill. Disposal of this solid
2 waste would not significantly reduce the life expectancy of the landfill.

3 **4.6.4 Mitigation**

4 No significant impacts to solid waste management would be anticipated. Therefore, no
5 mitigation would be required.

6 **4.7 ENVIRONMENTAL MANAGEMENT**

7 **4.7.1 Proposed Action**

8 *Pollution Prevention*

9 The demolition of the central steam plant and associated facilities at Fairchild AFB
10 would be accomplished in accordance with existing Air Force and Base directives, as well as
11 innovative pollution prevention technologies, to achieve the P2 goals of minimizing or
12 eliminating the use of hazardous materials, reducing the volume of hazardous wastes and
13 release of pollution into the environment, and conserving energy. The Proposed Action
14 would result in recycling and reuse of materials in order to reduce the amount of debris that
15 would enter landfills. The Proposed Action would not be expected to result in the inability of
16 the Base to achieve its P2 goals.

17 *Asbestos*

18 The contractor would be responsible for an asbestos survey prior to demolition
19 activities. It is possible that asbestos could be encountered in older buildings that would be
20 demolished. The demolition contractor would be responsible for all ACM removal. Friable
21 and nonfriable ACM would be removed prior to demolition by a licensed asbestos abatement
22 contractor using appropriate techniques prior to actual demolition of the building. All ACM
23 activities would be conducted in accordance with Base ACM management procedures.

24 *Lead-Based Paint*

25 The contractor would be responsible for a LBP survey of the facilities prior to
26 demolition activities. It is possible that LBP could be encountered in older buildings that
27 would be demolished. The demolition contractor would be responsible for all LBP removal.
28 Removal of LBP would comply with requirements identified in 29 CFR 1910 and ACM
29 management procedures established by Fairchild AFB.

30 *Environmental Restoration Program*

31 Impacts to the environmental restoration program would be considered significant if the
32 federal action disturbed (or created) contaminated sites resulting in adverse effects to human
33 health or the environment. An impact would be considered significant if it were to result in:
34 exposure of people or structures to major chemical hazards; impede the progress of ongoing

1 or planned investigations or remedial actions; or, result in uncontrolled release of
2 chemicals/fuels into the environment.

3 Fairchild AFB has two basewide IRP sites and four IRP sites located near the central
4 steam plant, as described in Subchapter 3.7.2. Facility demolition activities would be
5 coordinated with the Base Environmental Flight and Bioenvironmental Engineering to ensure
6 that demolition would avoid interference with any ongoing IRP investigation and remediation
7 work and would not worsen the condition of any site. With implementation of these best
8 management practices, impacts to IRP sites would be avoided.

9 **4.7.2 No Action Alternative**

10 No demolition of the central steam plant or associated facilities would be accomplished
11 at Fairchild AFB as a result of the No Action Alternative. No impacts to pollution prevention
12 would result from the No Action Alternative. Any asbestos or lead-based paint that may be
13 present at the central steam plant or associated facilities would continue to remain in place.
14 Impacts to ERP sites would not be anticipated. However, facilities construction typical of that
15 in previous years likely would occur as part of the overall facilities modernization plan for
16 Fairchild AFB. Management of ERP site work would continue in accordance with applicable
17 environmental plans and policies for Fairchild AFB. The No Action Alternative would not
18 result in impacts to environmental management at Fairchild AFB.

19 **4.7.3 Cumulative Impacts**

20 Other planned projects on Fairchild AFB are located where no ERP sites have been
21 identified. Other planned projects would be required to comply with regulatory requirements
22 for pollution prevention, ACM, LBP and ERP site avoidance as described for the Proposed
23 Action. This would minimize the potential for cumulative impacts. When completed,
24 activities at the other facilities would be managed in accordance with applicable
25 environmental plans and policies. No cumulative impacts to environmental management on
26 Fairchild AFB would be anticipated.

27 **4.7.4 Mitigation**

28 No significant impacts to environmental management would be anticipated. Therefore,
29 no mitigation would be required.

30 **4.8 UNAVOIDABLE ADVERSE IMPACTS**

31 Unavoidable adverse impacts would result from implementation of the Proposed
32 Action.

33 **4.8.1 Air Quality**

34 The emission of air pollutants associated with demolition of the central steam plant and
35 associated facilities is an unavoidable condition, but is not considered significant.

1 **4.8.2 Noise**

2 Noise resulting from temporary demolition activities at the central steam plant site is an
3 unavoidable condition. Short-term annoyance and speech interference may occur during the
4 period of time when demolition equipment is in use for the Proposed Action. Sleep
5 disturbance and hearing impairment would not be expected. Noise would not be considered a
6 significant impact.

7 **4.8.3 Safety**

8 The demolition contractor would follow applicable safety regulations and guidance,
9 thereby minimizing the potential for exposure to harmful substances in the event of a mishap
10 at the central steam plant during demolition.

11 **4.8.4 Energy**

12 The use of nonrenewable resources is an unavoidable occurrence, although not
13 considered significant. Demolition associated with the Proposed Action would require use of
14 fossil fuels, a nonrenewable natural resource. Energy supplies, although relatively small,
15 would be committed to the Proposed Action.

16 **4.9 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF** 17 **LONG-TERM PRODUCTIVITY**

18 The Proposed Action would not result in intensification of land use at the site or in the
19 area surrounding the Base. Implementation of the Proposed Action would not result in loss of
20 open space. The site of the central steam plant is designated for development, and was not
21 planned for use as open space. Therefore, it is not anticipated that the Proposed Action or No
22 Action Alternative would result in any cumulative land use or aesthetic impacts. Long-term
23 productivity of the site would be increased by implementation of the Proposed Action, which
24 would enable improvement to land use on the site.

25 **4.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

26 The irreversible environmental changes that would result from implementation of the
27 Proposed Action involve consumption of energy resources and human resources. The use of
28 these resources is considered to be permanent.

29 **4.10.1 Energy Resources**

30 Energy resources such as petroleum-based products (i.e., gasoline and diesel), natural
31 gas, and electricity would be used for the Proposed Action and would be irretrievably lost.
32 Gasoline and diesel would be used for operation of demolition vehicles and equipment.
33 Gasoline would be used for vehicle operation. Consumption of these energy resources would
34 not place a significant demand on their supply systems or within the region.

1 **4.10.2 Human Resources**

2 The use of human resources for demolition is considered an irretrievable loss only in
3 that it would preclude the affected personnel from engaging in other work activities.
4 However, the use of human resources for the Proposed Action represents employment
5 opportunities, and is considered beneficial.

6

1
2

CHAPTER 5 LIST OF PREPARERS

Name	Degree	Resource	Years of Experience
Crisologo, Rosemarie	B.S., Biological Sciences M.S., Environmental Engineering	Environmental Science	21
Schnapp, Angela	B.S. Nuclear Engineering M.S. Environmental Engineering	Environmental Engineering	9
Wallin, John	B.A., Biology M.A., Management	Project Manager	32
Wooten, R.C., Ph.D.	Ph.D., Ecology and Biology	Technical Manager	34

3
4

1
2

THIS PAGE INTENTIONALLY LEFT BLANK

1
2
3

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 7 REFERENCES

- 1
2
- 3 AI 1983. The Asphalt Institute, *Principles of Construction of Hot-Mix Asphalt Pavements*, Manual
4 Series 22, 1983.
- 5 AIRData 2003. United States Environmental Protection Agency Office of Air and Radiation, NET Air
6 Pollution Sources (1999), AIRData-Net Tier Reports for Adams, Grant, Lincoln, Spokane,
7 Whitman, Columbia, Garfield, Asotin, Benewah, Kootenai, Latah, Nez Perce, Shoshone
8 Counties, <http://www.epa.gov/air/data/reports.html>. 30 June.
- 9 CERL 1978. United States Department of the Army, Construction Engineering Research Laboratory,
10 *MicroBNOISE, A User's Manual, Technical Report N-86/12*, June.
- 11 Davis 1995. Margaret Davis, P.E., Butler Manufacturing Company, May 15, 1995.
- 12 Fidell *et al.* 1988. S. Fidell, T.J. Schultz, and D.M. Green. A Theoretical Interpretation of the
13 Prevalence Rate of Noise-Induced Annoyance in Residential Populations, *Journal of the*
14 *Acoustical Society of America*, 84(6), 1988.
- 15 Means 1996. 1996 Means Building Construction Cost Data, 54th Annual Edition, R.S. Means
16 Company, Incorporated, Kingston, Massachusetts.
- 17 Merritt 1976. *Standard Handbook for Civil Engineers*, Frederick S. Merritt, ed., 1976.
- 18 NAS 1977. National Academy of Sciences (NAS). 1977. "*Guidelines for Preparing Environmental*
19 *Impact Statements on Noise.*" Report of Working Group on the Committee on Hearing,
20 Bioacoustics, and Biomechanics, National Research Council. Washington, D.C.
- 21 USACE, 1976. United States Army Corps of Engineers, *Development of Predictive Criteria for*
22 *Demolition and Construction Solid Waste Management*, October 1976.
- 23 USAF 2003. Questions & Comments to Preliminary Central Steam Plant Demolition Environmental
24 Assessment (EA). Memorandum for 92 CES/CEV. Written by David K. Nelson, Maj, USAF,
25 BSC. Bioenvironmental Engineering Flight Commander. 23 September.
- 26 USAF 2002a. *Gate Security, Safety and Capacity Traffic Engineering Study. Fairchild Air Force*
27 *Base, Washington.* Draft (June) and Final (August).
- 28 USAF 2002b. *Add/Alter Main Gate Environmental Assessment. United States Air Force. Fairchild*
29 *Air Force Base.* Proponent: 92 CES/CEOE. September.
- 30 USAF 2002c. *Integrated Natural Resources Management Plan for Fairchild Air Force Base,*
31 *Washington.* 92nd Air Refueling Wing. December 1999. Updated January 16, 2002.
- 32 USAF 2001a. *Integrated Cultural Resources Management Plan for Fairchild Air Force Base.*
33 February.
- 34 USAF 2001b. *Statement of Work to Demolish Coal Burning Equipment, Central Steam Plant*
35 *Building 2175.* June 26.
- 36 USAF 2000. *Stormwater Pollution Prevention Plan for Fairchild Air Force Base.* March 7.
- 37 USAF 1999. *Wetland Management Plan. Fairchild Air Force Base.* Prepared by 92 CES/CEV.
38 December.

- 1 USAF 1997. United States Air Force, Air Mobility Command, Environmental Assessment, Proposed
2 C-17 Beddown, McChord Air Force Base, Washington, January 1997.
- 3 USAF 1978. Departments of the Air Force, the Army, and the Navy, AFM 19-10, TM 5-803-2,
4 NAVFAC P-970, *Environmental Protection, Planning in the Noise Environment*, June 15, 1978.
- 5 USDOT 1998. United States Department of Transportation, Federal Railway Administration Division.
6 *High Speed Ground Transportation Noise and Vibration Impact Assessment*. December.
- 7 USDOT 1992. United States Department of Transportation, Federal Aviation Administration,
8 *Guidelines for the Sound Insulation of Residences Exposed to Aircraft Operations*, 1992.
- 9 USDOT 1980. United States Department of Transportation, *Guidelines for Considering Noise in Land*
10 *Use Planning and Control*, Federal Interagency Committee on Urban Noise, June 1980.
- 11 USEPA 1995. United States Environmental Protection Agency, *Compilation of Air Pollutant Factors*,
12 *Volume 1: Stationary Point and Area Sources (AP-42)*, 5th edition, United States Environmental
13 Protection Agency, Ann Arbor, January.
- 14 USEPA 1988. United States Environmental Protection Agency, *Gap Filling PM₁₀ Emission Factors*
15 *for Selected Open Area Dust Sources*, EPA-450/4.88-003 Research Triangle Park, February.
- 16 USEPA 1985. *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area*
17 *Sources and Volume 2: Mobile Sources, AP-42, 4th Edition with Supplements*, United States
18 Environmental Protection Agency, Ann Arbor, Michigan. September.
- 19 USEPA 1974. United States Environmental Protection Agency. *Information on Levels of*
20 *Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of*
21 *Safety*, Publication No. 550/9-74-004, Washington, DC, March 1974.
- 22 Wouden 2002. *Steamed-Up About Savings. Decentralization results in a model M&V plan*. By Lt
23 Col Carl J. Wouden, Ph.D., HQ AMC. Air Force Civil Engineer. Volume 10. No. 1. Spring
24 2002. page 18. Downloaded 27 August 2003 from
25 <http://www.afcesa.af.mil/Publications/CEMag/Spring02/savings.pdf>.

1
2
3
4

**APPENDIX A
AIR FORCE FORM 813**

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPONENT INFORMATION

1. TO (Environmental Planning Function) 92 CES/CEV	2. FROM (Proponent organization and functional address symbol)	2a. TELEPHONE NO.
3. TITLE OF PROPOSED ACTION Demolition of Central Steam Plant at Fairchild AFB, Washington		
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) Building 2175, Central Steam Plant, is no longer in operation. All associated facilities need to be demolished and disposed of.		
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Demolish coal-burning and ash-handling equipment within the Steam Plant, building 2175, and adjacent spray Dryer Absorber (SDA) and Baghouse structures.		
6. PROPONENT APPROVAL (Name and Grade) Jonathan Wald, GS-11	6a. SIGNATURE 	6b. DATE 5-Nov-03

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)

		+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)			X		
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		X			
9. WATER RESOURCES (Quality, quantity, source, etc.)			X		
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)		X			
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		X			
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)			X		
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)			X		
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)			X		
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)			X		
16. OTHER (Potential impacts not addressed above.)			X		

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17.	<input type="checkbox"/>	PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR
	<input checked="" type="checkbox"/>	PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.
18. REMARKS		
17. An environmental assessment (EA) is being prepared to evaluate the impacts of this action on Fairchild AFB.		
No direct, indirect, or cumulative environmental impacts are anticipated with this action. The proposed action occurs in an area designated as in attainment for all air quality standards. The proposed action is considered to be de minimus, therefore a conformity determination is no required.		

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Ronald R. Daniels, EPC Exec. Sec.	19a. SIGNATURE 	19b. DATE 6 Nov 03
---	---	-----------------------

4. PURPOSE AND NEED

The purpose of the action is to eliminate the defunct Central Steam Plant, Bldg. 2175, because it is no longer in use and to increase the potential land use of the area now covered by the facilities. The action is needed to:

- increase safety and occupational health by eliminating unoccupied building and removing hazardous material;
- reduce the amount of waste, in the long-term, on Fairchild AFB by demolishing buildings and removing debris;
- improve overall base appearance and increase potential land use.

5. DESCRIPTION OF THE PROPOSED ACTION

Proposed Action: Demolish Central Steam Plant and Associated Facilities as Follows:

- Demolish coal-burning and ash-handling equipment within the Central Steam Plant including but not limited to coal pulverizers, weigh belt feeders, coal crusher with conveyor and dust collector, ash handling system, and steam-driven vacuum at the top of the Steam Plant.
- Demolish the SDA/Baghouse steel structures, the concrete exhaust stack, the connecting piping between the Steam Plant and SDA/Baghouse, and all ash-handling equipment, ash slurry system equipment, and all ancillary equipment within the facility.
- Remove 112 tons of pebble lime.