MEMORANDUM OF AGREEMENT FOR THE ADMINISTRATION OF A WETLAND BANK AT ROCKY FLATS

Introduction

The Rocky Flats Environmental Technology Site (RFETS) is owned by the Department of Energy (DOE). The current site mission is environmental restoration, waste management, management of special nuclear materials, and decontamination and decommissioning of facilities.

The environmental impacts associated with past, present, and future activities at the site are being investigated by DOE pursuant to the requirements of the Atomic Energy Act (AEA), the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Response actions undertaken may result in wetland impacts regulated by Section 404 of the Clean Water Act (CWA) on the RFETS. Wetland impacts resulting from CERCLA and non-CERCLA actions require mitigation.

The 6,265 acre RFETS has approximately 1100 wetlands covering approximately 191 acres that were identified and mapped in a 1994 sitewide wetland delineation performed by the U.S. Army Corps of Engineers (the Corps) Omaha District. The wetland inventory as identified by the Corps map is the basis for the RFETS wetlands map (Wetlands Map) which establishes the baseline for the wetlands inventory.

Regulatory Authority

Section 121 (e) of CERCLA establishes that a CWA Section 404 permit is not required for CERCLA response actions conducted entirely on site. However, it is EPA's responsibility to ensure that the substantive requirements of CWA Section 404 are met. CERCLA response actions must meet the substantive requirements of Section 404 of the CWA. For non-CERCLA actions on RFETS, the Corps administers the substantive and administrative requirements of CWA Section 404 including compliance with CWA Section 404(b)(1) Guidelines. By agreement between EPA and the Corps, EPA will make the determination of whether or not wetlands impacts on RFETS are related to CERCLA response actions. If impacts are not CERCLA related, the Corps has jurisdiction. For the purposes of this memorandum, the regulatory agency with jurisdiction will be considered the Lead Agency.

This Memorandum of Agreement for the Administration of a Wetland Bank at RFETS (MOA) has been designed with consideration given to the Draft Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (Guidance).

Mitigation projects will comply with the following:

1. Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR Part 230) .

2. The Memorandum of Agreement between the EPA and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines

3. The substantive requirements of Executive Order 11988, Floodplain Management .

4. The substantive requirements of Executive Order 11990, Protection of Wetlands .

5. The substantive requirements of 10 CFR 1022, Compliance with Floodplain/Wetland Environmental Review Requirements .

Purpose

This MOA is an agreement between DOE Rocky Flats Field Office (DOE, RFFO), EPA, the Corps, and the U.S. Fish and Wildlife Service (FWS), that describes how wetland impacts and mitigation will be accounted for using a mitigation bank established and maintained by DOE, RFFO. The sole purpose of this MOA is to provide the administrative procedure for using the acreage established by a wetland bank to ensure that RFETS wetland functions and values will be maintained.

This MOA is intended to enable DOE, RFFO to track compensatory mitigation for unavoidable wetland impacts resulting from DOE activities on the RFETS. This agreement is also intended to establish a means of tracking consolidation of compensatory mitigation for impacts to small, isolated, fragmented wetlands into parcels that provide enhanced wetland functions and values. The Parties agree that compensatory mitigation projects should be located where there are appropriate physical, hydrological, chemical, and biological characteristics to establish and maintain wetland functions and values in advance of wetland disturbance.

The Parties to this agreement have established that the goal of wetland mitigation is to achieve no overall net loss of wetland functions and values. This goal will be achieved by developing sustainable, functioning wetlands that provide compensatory mitigation for authorized unavoidable wetland impacts, while allowing CERCLA/RCRA response actions and other Site activities to proceed without unreasonable delays. The Parties to this agreement recognize that "no net loss" may not be achieved. However, it remains a goal to achieve no overall net loss of wetland functions and values resulting from RFETS activities.

Bank Administration

The DOE, RFFO, EPA, the Corps, and the FWS have agreed to the terms of this MOA, thereby establishing the administrative framework for managing the wetlands bank. DOE will take all necessary steps and use its best effort to obtain timely funding to meet commitments that may arise under this MOA. The Parties agree that any obligation of funds required as a result of this MOA are subject to the availability of appropriated funds, and no provisions shall be interpreted to require obligation or payments in violation of the Anti-Deficiency Act, 31 U.S.C. Sec. 1341.

Bank Sponsor/Administrator

DOE, RFFO is the wetland bank sponsor/administrator responsible for the overall management of the wetland inventory and responsible for ensuring wetland mitigation. DOE, RFFO will track compensatory mitigation for unavoidable impacts to wetlands resulting from DOE activities occurring within the RFETS boundary or within Operable Units associated with RFETS.

DOE, RFFO shall establish and maintain an accounting system in the form of a ledger that will document and track the credits and debits of the wetland bank. This ledger will provide an up to date running total of available wetland mitigation acreage. An example ledger used to administratively record each transaction is presented in Appendix A. Auditing of the ledger may be performed by EPA, the Corps, or the FWS on an as needed basis. In addition, field inspections and verification may be undertaken by any party to this MOA at any time.

DOE, RFFO shall prepare an annual report which documents all bank transactions occurring in the preceding 12 month period. This annual report shall be submitted to EPA, the Corps, and the FWS along with a revised site wetland inventory map. The revised map will show locations of projects that resulted in credits or debits for the preceding 12 month period.

Necessary Credit/Debit Documentation

Each wetland **credit** project submittal shall address the following information as appropriate:

* Identification of the Project Manager as point of contact
* Project description, including location maps and a description of the class and approximate acreage of wetland to be developed
* Plans for the restoration, creation, enhancement, or preservation of the compensatory wetland
* Project schedule
* Long term ownership and protection of the mitigation wetland, including appropriate real estate agreements and legal instruments which prevent harmful activities that would jeopardize the continued conservation purpose of the wetland
* Opportunity for public review and participation
* Availability of the water supply
* Funds for the development, operation, maintenance, and monitoring of the project during the bank's operational life, as well as for management of the project
* Performance standard for determining success of the wetland project and a monitoring plan to ensure that the standards are being met.
* Field verification of approximate acreage and kind, when established
* Maintenance plan.
* Remedial action plan describing the procedures for identifying and implementing appropriate remedial action when the need is identified by the monitoring plan.

Each wetland **debit** project submittal shall address the following information as appropriate:

* Identification of the Project Manager as the point of contact
* Project description, including location maps and a description of the class and approximate acreage of wetland to be impacted.
* Sequencing documentation
* Reasons and plans for impacting the wetlands
* Field verification of approximate acreage and kind

* Project schedule
* Opportunity for public review and participation

Checklists of required items for each credit and/or debit wetlands project are presented in Appendix B. The Parties may enlist the participation of various local, state, or federal entities to assist in the development of individual wetland projects.

Credit/Debit Evaluation

In general, the same methodology will be used to evaluate both credits and debits. DOE shall submit credit and debit documentation to the EPA and the Corps. Individual project requirements and schedules will be established by agreement between the Lead Agency and the DOE, RFFO project manager. In general, the Lead Agency will review documents submitted by DOE within 30 days. DOE will revise and resubmit documents for review within 30 days of receipt of comments and shall request approval from the Lead Agency.

The EPA and the Corps, in consultation with the FWS, will review mitigation projects proposed by DOE for use as wetland bank credits in accordance with the provisions of this MOA. Projects proposed by DOE for use as wetland mitigation bank credits will be identified using the 1987 Corps of Engineers Wetlands Delineation Manual, the same methodology as that used in the 1994 sitewide wetland delineation. After review, the EPA and the Corps will then, if they deem appropriate, approve. If approval is not given, EPA and/or the Corps will provide detailed explanation for disapproval.

For debit projects, the Lead Agency, in consultation with the FWS, will review the documentation. The Lead Agency will then, if deemed appropriate, approve. If approval is not given, the Lead Agency will provide detailed explanation for disapproval.

The credits and debits will be based on the number of acres of wetlands and on the Cowardin class of the wetland. Compensatory wetlands of the same Cowardin class as those being impacted will be considered in-kind mitigation. Appropriate mitigation ratios will be determined on a case by case basis, using professional judgment.

The credit value will be determined based on acreage to be attained from the compensatory wetlands at the time of debiting. The maturity of the compensation wetland and its apparent ability to survive and function, based on best professional judgment, should be factors in determining the value of the credits available. The debit value will be determined based on the areal extent of the impacted wetland, after considering the condition of the impacted wetland. The Lead Agency will make the determination of the relative value of credit and debit acreage.

Timing of Debits

In general, impacts to wetlands will not occur unless there is sufficient acreage available in the wetland bank to adequately mitigate for the impacts. It may be appropriate to allow limited debiting based upon a projected wetland acreage. Once an area has been mitigated for any project, that area will not require any future mitigation for impacts from that project (e.g., impacts associated with maintenance of ditches).

Sequencing Requirements

Site wetland mitigation will consist of sequentially avoiding wetland impacts, minimizing wetland impacts, and finally providing compensatory mitigation for any remaining unavoidable impacts. This sequencing will be consistent with mitigation policies established under the Section 404(b)(1) Guidelines and described in the MOA between the EPA and the Department of the Army. Bank credits will be used to provide compensatory mitigation only after this sequencing has been followed.

Wetlands Map

A RFETS Wetland Map will be prepared that is based on the wetlands delineation undertaken by the Corps of Engineers in 1994. The RFETS Wetland Map will be updated to reflect changes that occur in wetland extent and location.

Siting of Compensatory Wetlands

Compensatory mitigation should be undertaken in areas adjacent or contiguous to the impact site when practicable and environmentally preferable. The preference for on-site mitigation, however, should not preclude the use of an off-site mitigation project when there is no practicable opportunity for on-site compensation, or when use of an off-site project is environmentally preferable to on-site compensation. Mitigation locations will be selected after consideration of the potential for the site to provide the necessary physical, chemical, hydrologic, and biological characteristics and the desired wetland functions and values. The adequacy of the water supply, and the compatibility with adjacent land uses and watershed management plans will also be considered during site selection. Impacts to ecologically significant resources (e.g., upland and wetland), cultural resources, and threatened and endangered species will be avoided to the maximum extent practicable.

Compensatory wetland sites that allow in-kind replacement of wetlands will be preferable; however, locations that best support a different type of wetland (out-of-kind) may be used as compensatory mitigation in situations determined by the Lead Agency to be environmentally preferable.

Dispute Resolution

Except as discussed below, any disputes resulting over issues related to the mitigation bank will be addressed and resolved according to the dispute resolution provisions identified in the *Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks*. The Guidance referenced above contemplates only banks for Corps lead activities and projects. In activities related to CERCLA response actions, EPA is the lead agency and the parts of the Guidance referencing the Corps' role shall be interpreted to mean EPA's role.

The Parties to this agreement reserve their right to challenge any decision made by the other Parties to this agreement under all applicable laws relating to that decision.

Mitigation MOA Operational Life

This MOA will terminate upon written notification by any one of the signatories to DOE, the EPA, the Corps, and the FWS. Management and protection of the individual wetland projects undertaken will continue in compliance with the requirements of applicable laws.

MEMORANDUM OF AGREEMENT
FOR THE ADMINISTRATION OF A WETLAND BANK
AT ROCKY FLATS

James K. Hartman
Assistant Manager of Site Support and Security
DOE, RFFO Representative

Oct 25, 1995
Date

Max H. Dodson
Director, Ecosystems Protection and Remediation Division
EPA, Region VIII Representative

11/15/95
Date

Michael S. Meuleners
Colonel, District Engineer
U.S. Army Corps of Engineers Representative

2/6/96
Date

U.S. Fish and Wildlife Service Representative

3-11-96
Date

REFERENCES

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. La Roe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Fish and Wildlife Service Biological Report FWS/OBS-79/31.

DOE, 1991, Rocky Flats Interagency Agreement, January 22, 1991.

Draft Federal Guidance for the Establishment, Use and Operation of Mitigation Banks, Federal Register, Vol. 60, No. 43, March 6, 1995.

Executive Order 11988 (Floodplain Management).

Executive Order 11990 (Protection of Wetlands).

Letter from Bradley Miller, EPA to Tim Carey, U. S. Army Corps of Engineers dated January 5, 1993.

Letter from Timothy Carey, U. S. Army Corps of Engineers to David Simonson, DOE, RFFO, dated December 27, 1991.

Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines.

Section 404 (b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR Part 230).

U.S. Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

U. S. Army Corps of Engineers. 1994. Rocky Flats Plant Wetlands Mapping and Resource Study. Prepared for U. S. Department of Energy, Golden, Colorado. U. S. Army Corps of Engineers, Omaha District.

APPENDICES

CHECKLIST

for

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE WETLAND MITIGATION BANK CREDIT PROJECTS

Each compensatory wetland mitigation project submittal should address the following information as appropriate:

- Identification of Project Manager as point of contact.
- Project description, including location maps and a description of the class and approximate acreage of wetland to be developed.
- Plans for the restoration, creation, enhancement, or preservation of the compensatory wetland.
- Project schedule.
- Long term ownership and protection of the mitigation wetland, including appropriate real estate agreements and legal instruments which prevent harmful activities that would jeopardize the continued conservation purpose of the wetland.
- Opportunity for public review and participation.
- Availability of the water supply.
- Funds for the development, operation, maintenance, and monitoring of the project during the Banks operational life, as well as for management of the project.
- Performance standards for determining success of the wetland project.
- Maintenance plan.
- Field verification of approximate acreage and kind, when established.
- Monitoring plan adequate to evaluate the success of the wetland and to identify field conditions requiring remedial action.
- Remedial action plan describing the procedures for determining and implementing appropriate remedial actions when the need is identified by the monitoring plan.
- Contingency plan, including sufficient funding, to be used in the event of a project failure.

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
WETLAND MITIGATION BANK - CREDITS
EXAMPLE

Transaction #	Date	Map Location	Project Description	Acres	Credit
0001		Map 2 - A-7	Offsite wetland creation as part of Standley Lake Protection Project, completed June 25, 1995 at a cost of $XX,XXX.	8.07 PSS 3.65 PEM	8.07 PSS 3.65 PEM
0005		Map 3 - C -8	Two Ponds Wetlands Enhancement, completed September 21, 1995 at a cost of $XX,XXX	2.00 PFO	2.00 PFO

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
WETLAND MITIGATION BANK - DEBITS
EXAMPLE

Debits

Transaction #	Date	Map Location	Project Description		Mitigation Ratio	Total Debit
0002		Map 1 - F-4	RFETS Sandrock Blanket i Pond X-X, completed X, X Mitigation credit taken fro... Lake Protection Project (Map 2-A-7)		2 to 1	0.02 PSS
0003		Map 1 - C-5	Cleanout of culverts located in XXXXX, completed X, X, 1995. Mitigtaion credit taken from Standley Lake Protection Project (Map 2-A-7)	0.50 PSS 0.02 PEM	2 to 1 2 to 1	1.00 PSS 0.04 PEM
0004		Map 1 - D - 3	Cleanout of culverts located in XXXX, completed X, X, 1995. Mitigation credit taken from Standley Lake Protection Project (Map 2 - A - 7)	0.04 PSS 0.08 PEM	2 to 1 2 to 1	0.08 PSS 0.16 PEM
0006		Map 1 - D - 1	Cleanout of culverts located in XXXX, completed X, X, 1995. Mitigation credit taken from Standley Lake Protection Project (Map 2 - A - 7)	0.02	2 to 1	0.04

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
WETLAND MITIGATION BANK - DEBITS AND CREDITS COMBINED
EXAMPLE

Debits + Credits Combined

Transaction #	Date	Map Location	Project Description	T T			Total Debit	Total Credit
0001		Map 2 - A-7	Offsite wetland creation as part of Standley Lake Protection Project, completed June 25, 1995 at a cost of $XX,XXX.	C				8.07 PSS 3.65 PEM
0002		Map 1 - F-4	RFETS Sandrock Blanket Installation at Pond X-X, completed X, X, 1995. Mitigation credit taken from Standley Lake Protection Project (Map 2-A-7)	Debit	0.01 PSS	2 to 1	0.02 PSS	
0003		Map 1 - C-5	Cleanout of culverts located in XXXXX, completed X, X, 1995. Mitigation credit taken from Standley Lake Protection Project (Map 2-A-7)	Debit	0.50 PSS 0.02 PEM	2 to 1 2 to 1	1.00 PSS 0.04 PEM	
0004		Map 1 - D - 3	Cleanout of culverts located in XXXX, completed X, X, 1995. Mitigation credit taken from Standley Lake Protection Project (Map 2 - A - 7)	Debit	0.04 PSS 0.08 PEM	2 to 1 2 to 1	0.08 PSS 0.16 PEM	
0005		Map 3 - C -8	Two Ponds Wetlands Enhancement, completed September 21, 1995 at a cost of $XX,XXX	Credit	2.00 PFO			2.00 PFO

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
WETLAND MITIGATION BANK BALANCE LEDGER
EXAMPLE

Trans. No.	Date	Credits (Acres)						Debits (Acres)						Balance (Acres)					
		Wetland Type						Wetland Type						Wetland Type					
		PEM	PSS	PAB	PUB	PFO	PSB	PEM	PSS	PAB	PUB	PFO	PSB	PEM	PSS	PAB	PUB	PFO	PSB
0001		3.65	8.07											3.65	8.07				
0002									0.02					3.65	8.05				
0003								0.04	1.00					3.61	7.05				
0004								0.08	0.04					3.53	7.01				
0005						2.00								3.53	7.01			2.00	
0006												0.02		3.53	7.01			1.98	
0007									2.10					3.53	4.91			1.98	
0008								0.53						3.00	4.91			1.98	
0009																			
0010																			
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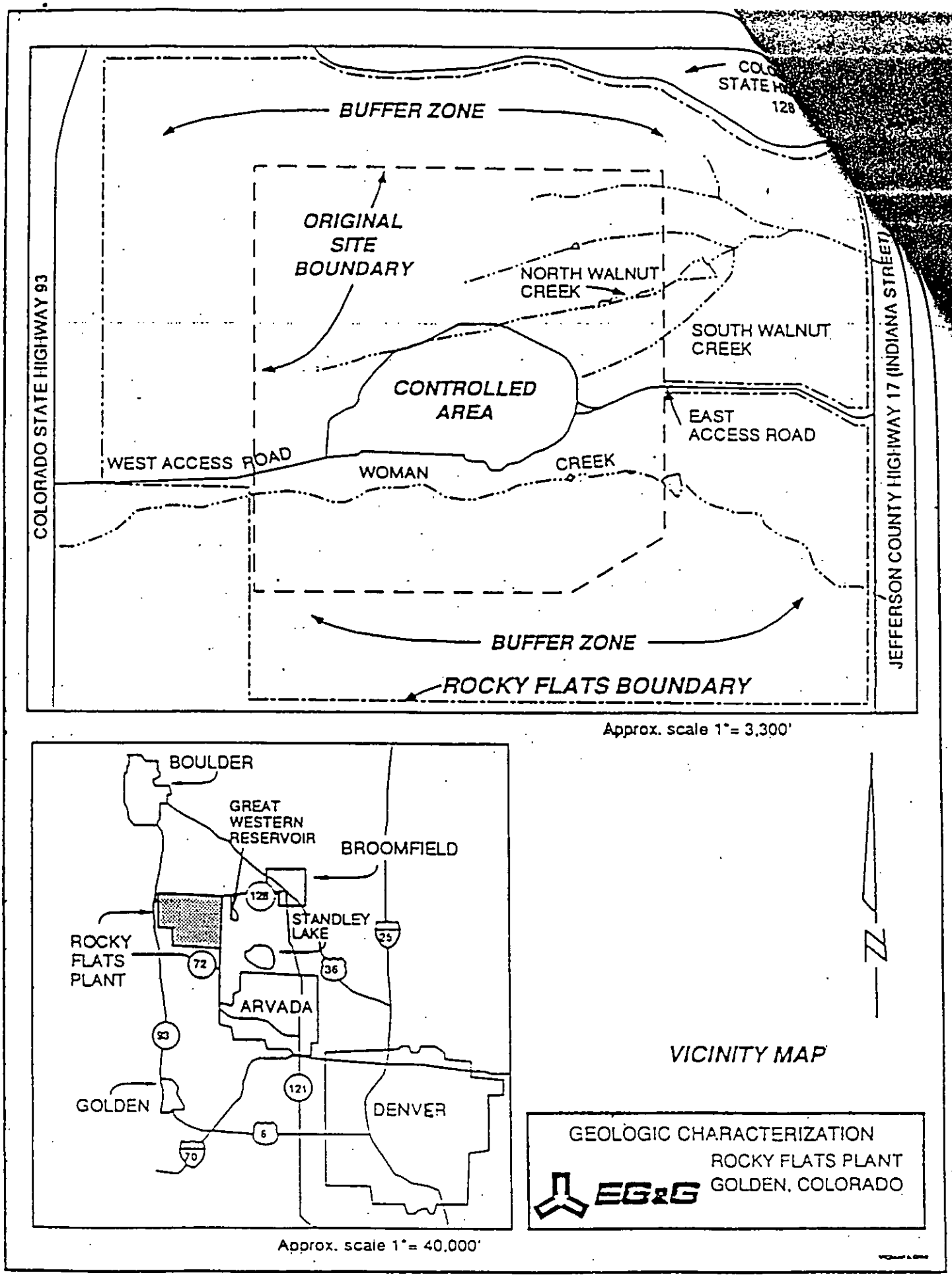
BUFFER ZONE
ORIGINAL SITE BOUNDARY
NORTH WALNUT CREEK
SOUTH WALNUT CREEK
CONTROLLED AREA
EAST ACCESS ROAD
WEST ACCESS ROAD
WOMAN
CREEK
COLORADO STATE HIGHWAY 93
JEFFERSON COUNTY HIGHWAY 17 (INDIANA STREET)
BUFFER ZONE
ROCKY FLATS BOUNDARY
Approx. scale 1"= 3,300'
BOULDER
GREAT WESTERN RESERVOIR
BROOMFIELD
STANDLEY LAKE
ROCKY FLATS PLANT
ARVADA
GOLDEN
DENVER
128
72
36
93
121
6
70
VICINITY MAP
GEOLOGIC CHARACTERIZATION
ROCKY FLATS PLANT
GOLDEN, COLORADO
EG&G
Approx. scale 1"= 40,000'

Figure 2-2