CCC16759

CORRES. CONTROL
OUTGOING LTR NO.

DE ORDER # _____
94 RF01389

DIST.	ltr	ENC
MARAL, M. E.		
BENEDETTI, R. L.		
BENJAMIN, A.		
BERMAN, H.S.		
BRANCH, D.B.		
CARNIVAL, G.J.		
COPP, R.D.		
DAVIS, J.G.		
FERRERA, D.W.		
HANNI, B.J.		
HARMAN, L.K.		
HEALY, T.J.		
HEDAHL, T.		
HILBIG, J.G.		
HUTCHINS, N. M.		
KIRBY, W.A.		
KUESTER, A.W.		
MAHAFFEY, J.W.		
MANN, H.P.	✓	
MARX, G.E.		
McDONALD, M.M.		
MCKENNA, F.G.		
MONTROSE, J.K.		
MORGAN, R.V.		
POTTER, G.L.		
PIZUTTO, G.L.		
RISING, T. L.		
SANDLIN, N.B.		
SETLOCK, G. H.		
STEWART, D.L.		
SULLIVAN, M.T.		
SWANSON, E.R.		
WILKINSON, R.B.	✓	
WILLIAMS, S. (ORC)		
WILSON, J.M.		
WYANT, R. B.		
BUSBY, W. S.	X	X
LAKE, D. Y. Q.		
Stiger, SG	✓	
CORRES CONTROL	X	X
RECORDS CTR (2)	X	X
ADMIN RECORD/080	✓	✓
ERM TRACKING	✓	✓
TRAFFIC		
CLASSIFICATION		
UCNI		
UNCLASSIFIED	X	
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER SIGNATURE

DOCUMENT CLASSIFICATION REVIEW WAIVER PER CLASSIFICATION OFFICE

DATE

IN REPLY TO RFP CC NO:
0185-RF-94

ACTION ITEM STATUS

☐ OPEN ☐ CLOSED
☒ PARTIAL

LTR APPROVALS:

ORIG & TYPIST INITIALS
BDP tjr

RF-46469 (Rev. 12/93)

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

February 1, 1994 94-RF-01389

Martin H. McBride
Acting Manager
Environmental Restoration
DOE, RFO

RESPONSE TO COMMENTS ON THE INDUSTRIAL AREA OPERABLE UNITS ENVIRONMENTAL EVALUATION (00626) – SGS-073-94

EG&G Rocky Flats, Inc. has prepared the attached response to comments that were transmitted by the Department of Energy, Rocky Flats Office (DOE, RFO) and in the above referenced memorandum dated January 12, 1994. These comments raised several issues regarding adherence to approved Standard Operating Procedures and Quality Assurance. Overall our findings indicate that most of the concerns raised by DOE, RFO were a fair assessment of the documents that were reviewed. However, some of the commentary alludes to the Industrial Area Environmental Evaluation (IA EE) documents as being in a "final" form. All of the IA EE documents were submitted to DOE, RFO as preliminary draft copies which were contemporaneously undergoing parallel review by EG&G. EG&G has provided preliminary drafts of other documents in the past to DOE, RFO in an effort to aid in providing better communication and to reduce review periods for subsequent and more formal transmittals in the future. However, if the same level of detailed formal comment and review is required for subsequent preliminary draft submittals, then the intent to save time and increase communciation is lost and may be reconsidered.

EG&G has prepared corrective actions addressing the noncompliances listed in the DOE, RFO comments as part of the attached responses. Also attached is EG&G's Environmental Quality Support review of non-compliance issues regarding the field work performed for the IA EE. The preliminary Phase I field data are currently ongoing revision and, once finalized, Environmental Quality Support will again assess their validity. EG&G is also expediting the approval of the most recent draft Standard Operating Procedures to ensure that all future field activities meet the highest quality standards practically achievable. Also, as requested, a corrective action proposal to rectify possible problems with procedural compliance and with the existing field data will be submitted to DOE, RFO on February 15, 1994.

If you have any questions or require additional information regarding this matter, please contact B. D. Peterman at extension 8659 or S. G. Berman at extension 8670 of Remediation Project Management.

S. G. Stiger
Associate General Manager
Environmental Restoration Management
EG&G Rocky Flats, Inc.

BDP:tjr

Orig. and 1 cc – M. H. McBride

Attachments:
As Stated

cc:

R H. Birk	–	DOE, RFO	
A. H. Pauole	–	"	"
R. J. Schassburger	–	"	"
M. N. Silverman	–	"	"

RESPONSE TO COMMENTS ON THE ROCKY FLATS INDUSTRIAL AREA ENVIRONMENTAL EVALUATION - PHASE I FEBRUARY 1, 1994

GENERAL COMMENTS

EG&G Rocky Flats (EG&G) wishes to clarify the context in which the referenced "Industrial Area Operable Units Environmental Evaluation" was reviewed. Comments transmitted in the Department of Energy Rocky Flats Office (DOE/RFO) memorandum dated January 12, 1994 address only the Field Sampling Plan (FSP) and the Phase I Data Summary, representing only the first of three phases comprising the Industrial Area Environmental Evaluation (IAEE). The IAEE FSP and the Phase I Data Summary were forwarded to DOE/RFO as a courtesy for information purposes only. The documents were undergoing parallel review by EG&G and were preliminary in nature. Original field forms were appended to the Phase I Data Summary, again for information only. Final transcribed forms were intended for submittal to the files, but never to be included in the IAEE Technical Memorandum (TM), which summarizes the three phases of the IAEE. A draft copy of the data summary for each of the three phases was provided to DOE/RFO. A draft copy of the TM was also transmitted for review.

The DOE/RFO memorandum states that nonconformance issues identified included the following:

1) The use of unapproved Standard Operating Procedures (SOPs), or not following approved SOPs;
2) The use of an unapproved FSP;
3) Performing field work outside of the time window specified in the FSP; and
4) Improperly corrected field forms.

The first issue, use of unapproved SOPs, relates to the fact that a later, draft version of SOPs dated 1992 was used instead of the approved version dated 1991. In reality, the only variations of the draft SOPs from the approved SOPs consist of the specified number of traps, the length of trapping, and personnel qualification requirements. All other significant aspects of the draft SOPs are the same as for the approved SOPs. The draft SOPs were used as the basis for training and implementation. All personnel working on the IAEE either met or exceeded approved SOP personnel qualification requirements. The rationale for using the draft SOPs was based on the fact that the Industrial Area (IA) has limited ecosystems and the draft SOPs provide greater flexibility in adapting to a study area having ecological conditions which differ from those existing for the buffer zone areas, for which the approved SOPs were primarily written.

The second issue, use of an unapproved FSP, pertains to the misunderstanding that the copy of the draft FSP provided to DOE/RFO was a formal FSP requiring DOE/RFO and agency approval. The FSP, perhaps more appropriately referred to as the Site Survey Plan (SSP), was provided to DOE/RFO for information only to identify the planned survey sites for the IAEE. In reality, the IAEE followed all requirements of the formally approved TM for Operable Unit 9 (OU9). All three phases of the IAEE completed to date represent sub-phases within Phase I of the OU9 TM. The SSP was prepared in response to the draft SOP requirement of concurrence of site selection by the EG&G project manager. The SSP also provided details concerning survey grid and line spacing which the draft SOP requires to be specified in a FSP. The OU9 TM provides minimal detail.

The third issue, performing work outside the time window of the FSP, relates to two possibilities. One possibility consists of the fact the OU9 TM calls for all ecological sampling to be conducted between April and September. Many delays were incurred in the process of finalizing the content

of OU9 TM with the agencies, which underwent some revisions in the interest of using an "abbreviated approach" for the EE at Operable Unit 4 (OU4). These changes were approved in TM 3 for OU4. EG&G was striving to maintain a current and consistent approach for operable units within the IA, which required awaiting resolution with OU4 before proceeding with the IAEE. The second possibility consists of the fact that field work commenced after issuance of the draft FSP/SSP but prior to the issuance of the draft final FSP/SSP. EG&G provided comments to its subcontractor for incorporation into a draft final FSP/SSP concurrent with authorization to proceed in the interest of expediting field activities.

The fourth issue, improperly corrected field forms, relates to the observation by DOE/RFO reviewers that certain notations taken in the field failed to comply completely with Quality Assurance requirements for legibility. The forms are being transcribed as a result of the parallel review being conducted by EG&G. A complete set of transcribed forms will be submitted by February 15, 1994.

In summary, many of the DOE/RFO comments relate to issues stemming from the fact that the documents and data in question were preliminary in nature and were not intended for formal review. EG&G recognizes that improved communication is needed to avoid similar misunderstandings in the future. EG&G also recognizes the imperative need for total compliance with all Quality Assurance and SOP protocols, as well as maintaining a strong, defensible technical rationale, a combined goal for which perfection is not always achievable. EG&G believes that the approach taken for the IAEE to date is defensible in the context of the OU9 TM Phase I survey activities. However, EG&G is prepared to repeat the surveys in the spring of this year to augment and verify data already collected.

Specific responses to comments follow.

SPECIFIC COMMENTS

Comment 1: NON-C Page 1-1 - The referenced IAEE is dated October 15, 1993. Some of the data presented in the report was collected on October 13, 1993. This results in a nonconformance per Section 15, OAPjP. It also appears that the work was done to a draft FSP, which was not approved for use by DOE, EPA, or CDH. This presents a second nonconformance per Section 15, QAPjP (working to an unapproved plan).

Corrective Action/ Response: The draft FSP was not intended to be a formal FSP requiring approvals. It was sent to DOE/RFO for information only. RUST was granted conditional approval from EG&G for the draft FSP with the understanding that comments made by EG&G would be reflected in the draft final FSP and the field work. Verbal approval was granted on October 11 and RUST revised the IAEE FSP to reflect EG&G's comments for a second version on October 15, 1993.

Comment 2: NON-C Page 1-1 - The referenced SOP manuals appear in error. The dates shown are 1992a and 1992b. These procedures should have been dated 5/91. It appears that the contractor worked to procedures that were not adopted. There also appears to be a problem with document distribution since 1992a and 1992b were never issued for general use. (nonconformance per Section 6, QAPjP, document control)

Corrective Action/ Response: The SOPs used are currently being reviewed by EG&G. The following SOPs were used:

EE.6, Rev. 1, Draft B (no date) Sampling of Small Mammals
EE.7, Rev. 1, May 1991 Sampling of Birds
EE.10, Rev. 0, October 19, 1992 Sampling of Vegetation
EE.11, Rev. 0 October 19, 1992 Identification of Habitat Types

The only variations of the draft SOPs from the approved SOPs consist of the specified number of traps, the length of trapping, and personnel qualification requirements. All other significant aspects of the draft SOPs are the same as for the approved SOPs. The draft SOPs were used as the basis for training and implementation. All personnel working on the IAEE either met or exceeded approved SOP personnel qualification requirements. The rationale for using the draft SOPs was based on the fact that the Industrial Area (IA) has limited ecosystems and the draft SOPs provide greater flexibility in adapting to a study area having ecological conditions which differ from those existing for the buffer zone areas, for which the approved SOPs were primarily written.

EG&G is expediting approval of these SOPs.

Comment 3: S Page 1-1 - It should be noted that the bird section is included under a separate cover.

Response: The draft IAEE TM includes a summary of all the data collected under the same cover.

Comment 4: E Page 1-1 - Specific Procedures should be highlighted. It is unknown what procedures were actually used. No procedures in 1992b appear to be used.

Response: The SOPs used are currently being reviewed by EG&G. The following SOPs were used:

EE.6, Rev. 1, Draft B (no date) Sampling of Small Mammals
EE.7, Rev. 1, May 1991 Sampling of Birds
EE.10, Rev. 0, October 19, 1992 Sampling of Vegetation
EE.11, Rev. 0 October 19, 1992 Identification of Habitat Types

Comment 5: S Page 1-1 - What work plan is this work being accomplished under?

Response: The IAEE followed guidance from the OU9 TM.

Comment 6: **NON-C** Page 2-1 - 3rd Para. - SOP EE-11 (1992a) was renamed 5.11. The correct procedure should be date 5/91. (nonconformance - Section 6, QAPjP)

Corrective Action/
Response: The SOP manual dated 5/91 references procedure EE.11 for Habitat Characterization. The Table of Contents lists procedures by EE.01 through .13, but each procedure is separately labeled at the tab as 5.01 through .13. EG&G will correct the labeling so that it is consistent with the text.

Comment 7: S Page 2-3 - 3rd Para. - "Mowed at least annually". How can an assessor make this call without any facts? Probable should delete.

Response: This was an observation by a trained biologist in vegetation with three years of experience at RFP.

Comment 8: S Page 3-2 - 1st Line - Reference procedure 5.10 rather than Releve. The page in which the method is described is in section 6.3 of the procedure.

Response: Will correct to the following: "...Relev- methodology (Procedure EE.10 or 5.10, Section 6.3)".

Comments 9: **NON-C** Page 4-1 - Trapping was conducted over 3 nights. - Procedure 5.6, section 6.2.1 indicates that trapping should be conducted over 4 nights. The procedure also indicates that trapping should be done in the spring and early fall. No spring data was collected. (Nonconformance - Section 3.0, QAPjP)

Corrective Action/
Response: The draft SOP offers four nights of trapping as a preference only, in draft procedure EE.6, Rev 1, Draft B, section 4.10. Trapping was conducted over three nights in recognition of the limited small mammal populations. Spring survey data may still be collected, if determined to be necessary.

Comment 10: S Page 4-1 - SOP EE.6 should be termed 5.6. It is clear how this could be confusing since in the SOP Table of Contents, the procedure is terms EE.06.

Response: Will correct to read "SOP EE.5.6".

Comment 11: S Page 4-2 - How do we know whether the animals were trapped more than once. Were they marked per the procedure? Data sheets do no indicate recapture.

Response: Draft SOP EE.6, Rev 1, Draft B, section 6.3.12 indicates that captured animals should be marked, unless otherwise specified in the FSP. The IAEE was designed to qualitatively assess the presence or absence of mammal populations, as specified in the OU9 TM. The OU9 TM offers marking only as an option in section 4.4.4, Mammal Population Characterization. It allows for other population assessment method to be employed. Professional judgement of senior professional was used as an alternative method, and the animals were not marked.

Comment 12: E Page 4-2 - Section 4.2 - Table 4.2 shows the Deer Mouse as reproductive. Change the text to reflect this.

Response: Corrections have been made or will be made where appropriate.

Comment 13: NON-C Page 4-2 - Section 4.3 - Table 4.3 shows 3 male WFD mice. This change should be made. No male WH mice were noted. (Table 4.3 shows 1 male WH mouse. The field data sheet shows none.) (nonconformance - Section 3.0 QAPjP - data will be independently validated and reviewed for anomalous values)

Corrective Action/
Response: Corrections have been made or will be made where appropriate.

Comment 14: NON-C Page 4-3 - 1st paragraph - the number of mice appear in error per table 4-3. (Nonconformance - Section 3.0, QAPjP - see above comment.)

Corrective Action/
Response: Corrections have been made or will be made where appropriate.

Comment 15: S Page 4-3 - Section 4.4, 3rd line - "The trail was probably in use by feral cats and cottontail rabbits." What was the basis for this comment? Tracks or feces?

Response: The basis for the comment was: 1) size of trail (mouse runs are generally much smaller in size; 2) scattered rabbit pellets; and 3) the presence of cats in the vicinity.

Comment 16: NON-C Tables 4.1, 4.2, 4.3 and 4.4 - The values are inconsistent between columns. Example: WFD mouse Table 4.1, Oct.14, 3 males

caught but 8 were juvenile. 43 errors were noticed in the tables, either by observation or comparison with the raw data sheets. (Severe Nonconformance - Section 3.0, QAPjP see comment #13)

Corrective Action/ Response: Corrections have been made or will be made where appropriate.

Comment 17: NON-C Appendix A, Survey Data forms are not numbered (14 pages). Nonconformance - Section 17.0, QAPjP under completeness, and EMD Admin Procedure # 17.01, Appendix 2.

Corrective Action/ Response: The survey data forms were preliminary in nature and were numbered by sample location and not consecutively. This has been corrected with a consecutive numbering system starting at 1 and ending at 24.

Comment 18: NON-C Form 5.10 - 14 pages - Appendix A - Nonconformance - Section 17.0, QAPjP. Record Quality: "QA records must be legible, identifiable, complete, authenticated..." Most of the forms are not totally legible, with data recorded in the margins the appropriate cover class codes were not used, the species codes were not reported, there are crossouts, data is unreadable, it appears that some data was taken in the field and named later, crossouts are not initialled and dated, some fields are not filled in with values, notes were made on the forms instead of in the field notebooks. Without the appropriate coding, the data cannot be entered into the RFEDS data base. (Over 200 occurrences.)

Corrective Action/ Response: These forms were preliminary in nature and are being transcribed to meet record quality requirements.

Comment 19: NON-C Appendix B - Form EE6.A appears out of date. The correct form is 5.6A. Forms are similar, but slightly different. It appears that EE6.A was replaced by 5.6A. Nonconformance with use of controlled documents (QAPjP, Section 6.0). Also same comments as comment #17, nonconformance with Section 17.0, QAPjP, "Corrections shall be made by scribing a single black line through the incorrect information, and entering the correct information in close proximity to the line out. Corrections shall include data and initials." (Over 52 occurrences.)

Corrective Action/ Response: These forms were preliminary in nature and are being transcribed to meet record quality requirements.

Comment 20: NON-C Appendix B - Form EE6.A - Dates have been changed. One form dated as October 14th is signed on October 13th. In addition, form 5.0E was not used at all.

Correction Action/
Response: The date was a transcription error and has been corrected. The field form used for the survey is provided in draft procedure EE.6, Rev 1, Draft B, Form EE.6A.

Comment 21: NON-C The overall quality of this document is poor, and is not complete nor defensible. Acceptance of this document by the M&O Contractor represents a nonconformance under Section 7.0 of the QAPjP. Acceptance criteria of items and services include technical verification of data produced and receipt inspection through peer review. It does not appear that either was accomplished.

Corrective Action/
Response: The Phase I Data Summary was intended to be an informal document to provide information on the progress of the IAEE. This Phase I Data Summary was a draft and therefore was not accepted by EG&G. The overall IAEE is summarized in a draft TM dated December, 1993, which has been submitted to DOE for review.

Phase I Data Summary Industrial Area Environmental Evaluation
Draft, October 1993
Reviewed by: D.A. Anders, Aguirre Engineering

Comment 1: Although I realize the time frame for completion and release of this Draft of the Phase I Data Summary for the Industrial Area (IA) Environmental Evaluation (EE) was very short (approximately two weeks), it is immediately apparent that there are a large number of technical editing errors that need to be corrected. I have marked my copy of this document to indicate the changes that need to be made, a copy of which is attached. This type of tech editing should have been accomplished by EG&G prior to transmittal of the document to DOE/ERD.

Response: Inconsistencies in the raw data and summary tables have been eliminated as part of a parallel review. D.A. Anders' marked copy contained very few other edits, as was noted during review of the marked up copy provided to EG&G.

Comment 2: Since this was a draft copy, all the pages should have been overprinted with "DRAFT", or have "Draft" stamped on some or all of the pages.

Response: This document was intended as an information only copy and not a formal submittal. The document was bound with a cover marked draft, which EG&G considers to be sufficient.

Comment 3: Of more concern are what are, to me, major problems with the raw data input. Specifically, I am concerned with the following:

- Botanical survey sheets. For the most part these are well done, and the only concerns are: (1) there were some unacceptable multiple strikeovers and scribbled deletions; (2) the key for % cover was not followed, and the "+, -, x, and o" system used was not explained, neither in the text nor in the raw data footnotes; (3) some of the cover class columns were vacant; (4) the sheets were not signed, and only the observers' initials were indicated; and (5) second sheets should have been used instead of adding lines for species to the first sheet, such as for the 10/14 and 10/15 dates. Field notes are acceptable in the margins, but not species lists; (6) one page was dated 8/14/93 instead of 10/14/93; (7) field notebook number not annotated on two pages.

- Mammalian survey sheets. These data sheets are possibly both for a scientific and QA standpoint completely unacceptable, and the study may have to be repeated.

- Proper QA procedures indicate that when errors are to be corrected, a single line is scribed through the erroneous data, which is then initialed and dated, and the correct information noted very nearby. Strikeovers, such as the dates on all of the mammal and two of the botanical survey sheets, are not acceptable.

- At a minimum, these sheets need to be reconstructed correctly, if this will be acceptable to the QA people. If this is <u>not</u> acceptable, the study will have to be repeated. I have discussed this at length with Dave George, DOE/ERD's QA person.

- No Field Notebook pages are recorded on any of the fieldnote forms in the Appendices. EE.06 section 7 of the SOP specifically requires the use and recording of all notes in the Field Notebook.

Response: The preliminary field data sheets are being transcribed from the existing field sheets to correct QA concerns. The field data collected are still valid (species information on presence, relative abundance, cover, etc.) in spite of QA concerns.

Comment 4: Specific comments on the general content of the document include the request that the Table of Contents (and, therefore, the text) should be expanded to include the minimum information outlined by RAGS II, insofar as required by the Work Plan. The Work Plan (Tech Memo for OU9) three components (i.e., [1] survey for migratory bird foraging, breeding, and nesting habitat; [2] survey for the presence of Species of Concern (SOC) and/or their critical habitat; and [3] ecotoxicological investigation for the potential for biotic dispersal of contaminants from OU9 into adjacent watersheds, etc.) will be accomplished. When the avian data has been included, this document will minimally meet the first two. Part (3) will be accomplished during Phase II.

Suggested outline, per RAGS II and the Work Plan:

Executive Summary
1.0 Introduction
  1.1 Objectives
  1.2 Scope
2.0 Identification of Habitat Types
  2.1 Vegetation Survey
    2.1.1 East Drainage Study Area
    2.1.2 North Pond and Seep Study Area
    2.1.3 Northwest Drainage Study Area
    2.1.4 West Railroad Study Area
    2.1.5 West Area Study Area
  2.2 Small Mammal Survey
    2.2.1 - 2.2.5 (as for Vegetation, above)
  2.3 Bird Survey
    2.3.1 - 2.3.5 (as above)
3.0 References
List of Tables
List of Figures
Appendices
Appendix A Habitat and Vegetation Survey
Appendix B Small Mammal Survey

Response: The EPA guidance document entitled "Framework for Ecological Risk Assessment" dated February 1992 was used as a basis for an outline ensuring all elements of the OU9 TM were included. The guidance postdates and builds on RAGS II. The outline also incorporated the approach approved by the agencies and recommended by DOE in a memorandum dated June 8, 1993 (ERD:SRS:06509).

Comment 5: Even though Part 3 was to be completed during Phase II, the results of Phase I were intended to initiate development for a Biota Transport Model (BTM), if

warranted by the results of Phase I. A BTM is a prediction of contaminant loads dispersing outward in biotic vectors from the IA, and is intended to complement data on abiotic contaminant transport (Section 9.5.1.2, Tech Memo). This needs to be addressed in the EE. Objectives of Phase II field sampling program as outlined in the Tech Memo, Section 9.5.2. This information will be utilized in developing the ecological risk assessment, remediation criteria, and operable unit coordination for the IA (Tech Memo, Section 9.5.4).

Response: The BTM has been developed as part of the draft IAEE TM.

Comment 6: Section 9.4.4 (Tech Memo) indicates that all surveys would occur between the beginning of April and the end of September (1992) for OU9 (the SOP indicates until the end of October, but this was amended by the Work Plan), and it is assumed that this time frame would be the same for the other OUs. Given that the date has slipped from 1992 to 1993, it is unclear why the study was conducted in mid-October. Possibly this was the earliest it could be conducted due to contract constraints. The April - September window was selected to provide the height of the summer season to maximize mammalian capture and the occurrence of phytoflorescence.

Response: The impact of letting the field program slip to October and November was to miss the breeding period for birds. There was no impact to the small mammal survey. In fact, this delay probably helped to provide additional information on species present and behavior of young. During the trapping program, many young deer mice and western harvest mice were observed (trapped or in the field) dispersing from nests. This juvenile dispersal was recognized by the weight, size and pelage of the captured individuals. Had trapping occurred during September, these observations and data would have been missed.

The delay into mid October was justified given the mild fall weather, during which time only one significant frost event occurred prior to the survey. Because the survey was qualitative in nature, it was possible to determine presence and absence of all key plant and mammal species in this later time frame.

Comment 7: The Tech Memo (Section 9) also specified that directed surveys for several threatened or endangered species (or suitable habitat for these species of concern) would be accomplished. These species include: Diluvium (or Ute) Lady's Tresses (*Spiranthes diluvialis*); forktip threeawn (*Aristida basiramea*), Colorado butterfly plant (*Gaura neomexicana var. coloradensis*); and Preble's jumping mouse (*Zapus h. preblei*). It is unclear whether this was to be accomplished under I or Phase II, but no mention of it is made in the IAEE.

Other Species of Concern (SOC) potentially present at RFP but less likely to occur in the IA are the white-faced ibis (*Numenius americanus*); ferruginous hawk (*Buteo regalis*), Swainson's hawk (*B. swainsonii*), and swift fox (*Vulpes velox*). None of these species were noted on the species lists for the IA, so they were not found during the Phase I studies. A complete list of species of concern is given in Table 1 of the Tech Memo.

Response: Several of these species were eliminated based on prior site knowledge and experience. The Diluvium Lady's Tresses and the Colorado butterfly plant require different habitats than those found in the IA. Habitats for the forktip threeawn and the Preble's jumping mouse do exist in the IA, but none were found. Suitable habitats for the other species are not present in the IA, although some of the hawks have been seen flying overhead.

Comment 8: Table 3.1 (botanical data) should be revised to indicate both common and

botanical names. Table 3.1 could be deleted, as the information would be indicated in the tables for individual study sites (see #8, below); however, the aggregated information is of interest and value.

Response: EG&G believes that this is unnecessarily redundant.

Comment 9: Tables 3.2 through 3.6 should be developed to indicate botanical information for each individual study sites, as was done for the mammalian study.

Response: This correction can be made.

Comment 10: Since the information on the bird survey is probably completed by this date, the avian data should be treated in a similar manner to that of the other studies.

Response: These data has been included in the draft IAEE TM.

Comment 11: Inconsistencies were noted between the information given in the raw data, the text, and the tables on the mammalian data which should be corrected. I have indicated the changes on the attached edited copy.

Response: Corrections have been made or will be made where appropriate.

Comment 12: I disagree with the way the total numbers of animals are represented in Table 4. When a date is given as a heading, the total number of animals captured on that date should be given, not the total number of animals for the entire study (see edited copy, attached).

Response: The table present numbers captured on the date captured. These data are indicated in the body of the table.

Comment 13: All of the references cited in the Tech Memo in Section 9.3 Resource and Habitat Description and Section 9.4 Habitat and Biota Surveys (RFI/RI Phase I) should have been integrated into the document. Methodologies for ecological surveys at RFP are specified in the EG&G SOP.

Response: EG&G followed requirements of OU9 TM in addition to the EPA guidance entitled "Framework for Ecological Risk Assessment" dated February 1992. The OU9 TM does not contain sections 9.3 and 9.4. These sections appear in the OU9 Phase I RFI/RI Work Plan. All requirements of the OU9 TM superceed the Work Plan.

Comment 14: As the EG&G SOP for Ecology specifies that a Master's Degree and two years of field experience are the minimum qualifications required of personnel conducting the surveys, a resume section should be included in the final document. Joe Merino (mammalian survey) has a dual Ph.D. On the botanical survey, I am assuming that "DAT" is Darcy A. Tiglas, M.S., and "SAB" is Samuel A Bamberg, Ph.D., both of who certainly meets the requirements. I am curious about "Bruce J. Bevirt" and "Neil S." (mammalian survey).

Response: Mr. B. Bevirt has a MS in the sciences. He was a cleared escort for that day. Neil Holstein was also a cleared escort. Both held traps but did not participate in handling or identification of animals. These individuals were not integral to the survey.

Comment 15: Figures 1 - 6B were developed by RUST and should coincide very closely with the Rocky Flats Vegetation Map. The Tech Memo states that the Phase I data be used to validate or correct the Rocky Flats Vegetation Map (Section 9.4.4.1). In general, I concur with the information presented on the map figures, with the following exceptions:

- Figure 2 IAEE East Drainage;
- Figure 4 IAEE Northwest Drainage;
- Figure 6A IAEE West Area.

Each of these maps missed areas that have been designated as wetland in the EG&G Land Use Manual. Section 9.3.4 of the Work Plan specifically states that wetlands have been identified in the IA, and "(t)hese may be evaluated by releve plots for collection of phytosociological data on density and species composition." I saw no mention of wetlands in either text or figures, and no releve plots of any data relating to wetlands.

Response: The information collected during the field surveys will be checked against the Rocky Flats Vegetation Map to make any corrections necessary.

EG&G ROCKY FLATS
ENVIRONMENTAL MANAGEMENT DEPARTMENT

EMD
Surveillance Report

Surveillance Date: 01-20-94
Page 1 of 2
Surveillance No: EQS-EPM-94-02

Surveillance Subject:

The performance and product of Environmental Evaluations performed to support OU's.

Attachment #2
SGS-073094
Page 1 of 2

Surveillance Scope: Surveillance will verify that work was performed in compliance with approved procedures.

Personnel Contacted:

Suzanne Berman - RPM
Tim O'Rourke - RPM
Bruce Peterman - RPM
Larry Woods - EPM
Fred Harrington - EPM
Steve Nesta - E&WM
Bruce Bevirt - NEPA

Surveillance Results:

O **Executive Summary:**

This surveillance was originally initiated as a result of an Environmental Evaluation (EE) that was completed to support the combined Industrial OU's (8,9,10,12,13, 14). There were concerns expressed that the EE was not completed to approved procedures and therefore, may contain data that may be considered as possibly nondefensible. The preponderance of evidence would indicate that the work may have been performed to draft procedures, that do not necessarily align with the approved procedures.. In addition, it would appear that some of the work performed may not conform to any procedures, draft or approved.

O **Deficiencies:**

DR EQS/94-0016 -The Environmental Evaluation performed for the Industrial Area Field Sampling Plan was not conducted in compliance with approved procedures.

Surveillance Team:

Team Leader:

Team Members S. D. Chestnut

NCRs for deficiencies observed during this surveillance are attached.

QA Program Manager

1/28/94
Date

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Comments: On 01-13-94 the surveillance team was contacted by Tim O'Rourke (RPM). Mr. O'Rourke was concerned that there had been an Environmental Evaluation (EE) performed outside the scope of the approved EE procedures 5-21000-OPS-EE. Mr. O'Rourke further asked that Environmental Quality Support attend a fact finding meeting scheduled for 10:00 January 17, 1994. The purpose of the meeting was to determine what procedures and process Environmental Protection Management (the organization responsible for EE's) had utilized to conduct the EE.

It was stated by EPM that the EE's may have been performed to draft procedures because there was sufficient technical justification to warrant the minor changes that the draft procedures incorporated over the approved procedures. EPM felt that the only deviation from approved procedures that was of any consequence could have been a change from 4 nights trapping to 3 nights trapping in the small mammal sampling procedure. To provide additional confidence of this statement, the surveillance team juxtaposed the approved procedures and the draft procedures. The major differences identified are as follows:

- Approved procedures require 4 nights of trapping for small mammals - draft procedures require 3 nights.
- Approved procedures require a minimum of a Masters degree (respective to the science) with 2 years experience - the draft procedures allow for a Bachelors degree with 4 years experience.
- Approved procedure forms are formatted differently than the draft procedures.
- The method of killing the small mammal for biological samples can vary between the approved and draft.
- Pellet counts for large mammals are somewhat different between the draft and the approved process.

Though there may be technical justification for the above listed deviations, they are nonetheless deviations and therefore, require identification and corrective action. EQS is issuing DR # EQS/94-0016 for work activities not being performed in compliance with the governing procedure.

In addition to the Deficiency Report, it is recommended that management may want to consider rework of the Environmental Evaluation of vegetation. This recommendation stems from the fact that some of the critical information may be missing from the report and may not be reproducible without re-work.

CONCLUSION:
Technically the approved procedures and the draft procedure may be virtually the same. Administratively there may be some problems with the process used by those performing the work. EPM stated that they assumed responsibility for the procedures in April of 1993 and therefore, it is responsibility of EPM to establish approved procedures for quality affecting activities prior to the commencement of work (Quality Assurance Manual QR-5). Conversations with some of the EPM staff would indicate that schedule was considered a priority and was the basic root cause for the noncompliance.

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