Fresno
Kern
Kings
Madera

San Joaquin Valley
Unified Air Pollution Control District
2314 Mariposa Street
Fresno, California 93721
(209) 488-3330
FAX (209) 488-3134

Merced
San Joaquin
Stanislaus
Tulare

ISSUE DATE: March 30, 1992

CERTIFICATE NO. 4013003/101/201/301/401/601

DATE: July 9, 1991

EMISSION REDUCTION CERTIFICATE IS HEREBY GRANTED TO:

SHELL WESTERN E&P, INC.

ACTUAL HISTORICAL ERC:

Pollutant:		PM10	SO4	SO2	NO2	CO
Amount: lbm/day	1st Qtr	10.06	6.42	283.57	61.32	0.81
	2nd Qtr	11.72	7.47	330.26	71.42	0.94
	3rd Qtr	5.49	3.50	154.80	33.47	0.44
	4th Qtr	4.68	2.98	131.81	28.50	0.37

S	T	R	Location:
			Central Kern County Oilfields

EMISSION REDUCTION CREDIT ACHIEVED BY:

Conversion to gas-fired only of one oilfield steam generator.

PARTIALLY CONSUMED
S-259-2,3,4,5 SWEPI
&
S-261-2,4 BEAR MOUNTAIN LIMITED

Validation Signature:

Manager of Engineering Evaluation

PROOF OF PUBLICATION

State of California ~ss
County of Kern ~

I am a citizen of the United States and a resident of the County aforesaid: I am over the age of 18 years, and not a party to or interested in the above entitled matter. I am the assistant principal clerk of the printer of The Bakersfield Californian, a newspaper of general circulation, printed and published daily in the City of Bakersfield, county of Kern, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Kern, State of California, under date of February 5, 1952, Case Number 57610; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

2/6

all in the year 1992

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Roslyn T. Williams
Signature

Dated at Bakersfield, Ca
FEBRUARY 4, 1992

ROSLYN T. WILLIAMS

Proof of Publication of:

5762

REQUEST FOR PUBLIC COMMENT

REQUEST FOR PUBLIC COMMENT ON PROPOSED STATIONARY SOURCE EMISSIONS REDUCTION CREDITS (ERC)

Pursuant to Rule 220.1 of the Kern Zone of the San Joaquin Valley Unified Air Pollution Control District Rules and Regulations, the the Air Pollution Control Officer has made a preliminary decision to approve emissions reduction credits for PM10, SOx, SO2, NOx, and CO resulting from Conversion of 11 Oilfield Steam Generators to Gas-Fired Only by Shell Western E&P, Inc. at Mt. Poso and Kern River Oilfields.

Public comments regarding the expected air quality impact of this project will be received by the District for a period of thirty (30) days after the publication of this notice and will receive due consideration before final action is taken.

The application for emissions reductions credits, support documents and the District's air quality impact analysis for projects #8013 #10703-#10708 are available for inspection at the District's office with Lance Erickson located at 2700 "M" Street, Suite 275, Bakersfield, California 93301, (805) 861-3682.

February 6, 1992 (5762)

RECEIVED
FEB 13 1992
KERN COUNTY AIR POLLUTION CONTROL DISTRICT

PROOF OF PUBLICATION

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
EMISSIONS REDUCTIONS FOR DEPOSIT IN COMMUNITY BANK

To: Kern Zone, SJVUAPCD Date: 3/30/92

Attn: PLY

From: Kern Zone, SJVUAPCD

Zone Contact: Lance Phone: X650

RE: EMISSIONS REDUCTIONS FOR DEPOSIT IN THE COMMUNITY BANK:

Describe Action Generating Credits: Conversion of SG to Gas Fraction

Company Name: SWEP

ATC No: _____ (If Applicable)

ERC No: 4013003/101/201/301/401/601 (If Applicable)

Date Reductions Occurred: 3/30/92

The above referenced action has generated emissions reduction credits which are to be included in the Community Bank. Please include the following amounts, expressed in average daily credits for each calendar quarter, in the Community Bank registry:

AVERAGE DAILY EMISSIONS REDUCTION CREDITS (lbs/day)

QUARTER	VOC	NOX	CO	PM10	SOX (SO4)
1ST	-	6.81	0.09	1.12	31.51 (0.71)
2ND	-	7.94	0.10	1.30	36.70 (0.83)
3RD	-	3.72	0.05	0.61	17.20 (0.39)
4TH	-	3.17	0.04	0.52	14.65 (0.33)

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

February 3. 1992

Mr. Raymond Menebroker. Chief
California Air Resources Board
Project Review Branch
Stationary Source Division
P. O. Box 2815
Sacramento. CA 95812

SUBJECT: **Preliminary Public Notice - Emissions Reduction Credits**
Project #'s 4013 910703-910709

Dear Mr. Menebroker:

Enclosed for your review and comment is the analysis of Shell Western E&P's request for emissions reduction credits for Conversion of 11 Oilfield Steam Generators to Gas-Fired Only.

Also enclosed are the draft Banking Certificate documents and a copy of the preliminary public notice to be published on approximately February 7. 1992. This will start the 30-day public comment period.

Please submit your written comments on our analysis and draft documents as soon as possible to provide ample time for our review and consideration.

Thank you for your cooperation in this matter. Should you have any questions please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
AIR POLLUTION CONTROL OFFICER (SED)
ASST. AIR POLLUTION CONTROL OFFICER (SJVUAPCD)

Thomas Paxson. P.E.
Manager. Engineering Division

LE/cs
Enclosures

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

February 3. 1992

Mr. Matt Haber. Chief
U.S. E.P.A.- Region IX
New Source Section
75 Hawthorne St.
San Francisco. CA 94105

SUBJECT: Preliminary Public Notice - Emissions Reduction Credits
Project #'s 4013 910703-910709

Dear Mr. Haber:

Enclosed for your review and comment is the analysis of Shell Western E&P's request for emissions reduction credits for Conversion of 11 Oilfield Steam Generators to Gas-Fired Only.

Also enclosed are the draft Banking Certificate documents and a copy of the preliminary public notice to be published on approximately February 7. 1992. This will start the 30-day public comment period.

Please submit your written comments on our analysis and draft documents as soon as possible to provide ample time for our review and consideration.

Thank you for your cooperation in this matter. Should you have any questions please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
AIR POLLUTION CONTROL OFFICER (SED)
ASST. AIR POLLUTION CONTROL OFFICER (SJVUAPCD)

for Thomas Paxson. P.E.
Manager. Engineering Division

LE/cs
Enclosures

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

February 3, 1992

Mr. J.A. Ruhl, Manager
Health, Safety & Environment
Shell Western E&P, Inc.
West Coast Production Division
P.O. Box 11164
Bakersfield, CA 93389-1164

SUBJECT: Preliminary Public Notice - Emissions Reduction Credits
Project #'s 4013 910703-910709

Dear Mr. Ruhl:

Enclosed for your review and comment is the analysis of your request for emissions reduction credits for Conversion of 11 Oilfield Steam Generators to Gas-Fired Only.

Also enclosed are the draft Banking Certificate documents and a copy of the preliminary public notice to be published on approximately February 7, 1992. This will start the 30-day public comment period.

Please submit your written comments on our analysis and draft documents as soon as possible to provide ample time for our review and consideration.

Thank you for your cooperation in this matter. Should you have any questions please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
AIR POLLUTION CONTROL OFFICER (SED)
ASST. AIR POLLUTION CONTROL OFFICER (SJVUAPCD)

Thomas Paxson, P.E.
Manager, Engineering Division

LE/cs
Enclosures

TELEPHONE CONVERSATION

Date: 1/31/92
Time: _____

With: Eileen Lindsay Title: _____

Company : SWEP WE Phone: _____

APCD Representative: Lance Ericksen Title AQE

Subject of Conversation: _____

Summary of Conversation:

EL 4 M+ poso are unscrubbed we have requested permits be corrected to remove scrubber from permits + scrubber conditions

LE I'll review files + Rule 424 plan if these are authorized to operate unscrubbed I'll revise my calculations.

Shell Western E&P Inc.
An affiliate of Shell Oil Company

P.O. Box 11164
Bakersfield, CA 93389

March 13, 1992

Mr. Thomas Paxson, P.E.
Manager, Engineering Evaluation
San Joaquin Valley Unified
Air Pollution Control District
Kern Zone
2700 "M" Street, Suite 275
Bakersfield, CA 93301

Dear Mr. Paxson:

SUBJECT: NOTIFICATION OF OIL FIRING EQUIPMENT REMOVAL
ON STEAM GENERATORS ASSOCIATED WITH ERC APPLICATIONS
PROJECT NOS. 911202 & 910703 - 910709
REQUEST FOR INSPECTION

This letter shall serve as official notification that oil firing equipment has been removed from all steam generators for which emission reduction credits are being sought (see attached listing). We request that an APCD inspection be completed as soon as possible so that PTO's can be issued and processing of the pending ERC applications can be completed.

Our Mr. Jeff Elliott will be happy to escort or accompany you to the various steam generator locations. You may contact him at 326-6045 to make arrangements.

Should you have any questions or need further information, please contact Ms. Eileen Lindsay at 326-5442.

Sincerely,

James P. Mosher

for: J. A. Ruhl
Manager Health, Safety & Environment
West Coast Production Division

EFL

Enclosure

cc: Mr. Steve Beyn
Senior Specialist
Kern Zone

CBCD9207203 - 0001.0.0

STEAM GENERATORS TO BE INSPECTED

KERN RIVER FIELD

SWEPI GENERATOR NAME	PTO NUMBER
PRICEWELL #4	4013423I
" #5	094K
" #7	096K
" #8	098K
" #9	099K
" T-2	004J
BISHOP #69	076E
RAMBLER #1	073J
" #5	042P
" #6	072G
" #13	002E
MCMANUS #T-1	001F
" #8	110C
MIDWAY PREMIER #2	003D

MT. POSO FIELD

SWEPI GENERATOR NAME	PTO NUMBER
CLUSTER D #1	4013079J
" #2	080J
" #4	082I
" #5	083J
" #6	084I
CLUSTER A #1	040J
" #2	045J
" #3	044L
" #4	043I
" #6	041K
CLUSTER C #2	029J
" #3	030I
" #6	033I
NPU #2	027I
" #4	039J
" #5	086K
CLUSTER B #2	022M
" #3	038J
" #4	037K

Shell Western E&P Inc.
An affiliate of Shell Oil Company

P.O. Box 11164
Bakersfield, CA 93389

October 30, 1991

HAND DELIVERED

Mr. Thomas Paxson, P.E.
Manager Engineering Evaluation
San Joaquin Valley Unified
Air Pollution Control District
Kern Zone
2700 "M" Street, Suite 275
Bakersfield, CA 93301

Dear Mr. Paxson:

SUBJECT: ADDITIONAL DATA FOR ERC APPLICATIONS FOR CONVERSION OF GENERATORS TO GAS FIRED ONLY - PROJECT #'S 910703 - 910709, APPLICATION #'S 4013094 & -096; -001; -026; -003; -002 & -072; -032 & -085; AND -028 & -081

This letter shall also serve as formal notification that the subject Shell Western E&P Inc. (SWEPI) generators have ceased oil fired operations and that the emissions reductions applied for have actually occurred.

Per your letter of September 30, 1991, enclosed is fuel use data for the years 1989 and 1990 with corresponding quarterly emissions for the subject generators. Also included is a summary of quarterly emissions by application. As per our October 22, 1991 FAX to you, the emission calculations are based on the formula in the current SJVUAPCD New Source Review Rule: AER = CE*HAE. Also note that since we do not have oil fired source tests for "20's" with which to calculate Historical Actual Emissions, those emissions are based on approved emission factors, as discussed with Mr. Lance Erickson. The proposed lb/MMBtu limits used in the Control Efficiency calculations are the currently approved SLC factors.

Enclosed is an application to modify the authorized lbs/day limit on our SLC Compliance Plan for each of the subject generators and our check number 058362 for $60 to cover the filing fee. As a result of surrendering our oil firing capability and applying for ERC's, the authorized limits will be reduced. Per telephone conversation between Mr. Erickson and our Mr. Steve Messner, these limits were determined by multiplying the current gas fired SLC lb/MMBtu emissions factors by each generator's rating.

CBCD9130202 - 0001.0.0

Per your September 30th letter, also enclosed is our check number 000204 for $2510 to cover the additional fees required under SJVUAPCD Rules for banking certificate applications. Fees are broken as follows:

Project 910703 =	$350
Project 910704 =	410
Project 910705 =	350
Project 910706 =	350
Project 910707 =	350
Project 910708 =	350
Project 910709 =	350
TOTAL	$2510

Should you have any questions or need further information, please contact Mr. S. D. (Steve) Messner at 326-5982.

Sincerely,

J. A. Ruhl
Manager Health, Safety & Environment
West Coast Production Division

EFL

Enclosure

SHELL WESTERN E&P INC.
EMISSIONS REDUCTION CREDITS SUMMARY BY PROJECT/APPLICATION
FILENAME: ERCSUM.WK1

LBS/DAY

GAS FIRE EMISSIONS CREDITS	PROJECT 8910703 PTO 4013094 & -096				PROJECT 8910704 PTO 4013001				PROJECT 8910705 PTO 4013026				PROJECT 8910706 PTO 4013003				PROJECT 8910707 PTO 4013002 & -072				PROJECT 8910708 PTO 4013032 & -085				PROJECT 8910709 PTO 4013028 & -081			
	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR	1 QTR	2 QTR	3 QTR	4 QTR
NOX	172.75	28.44	0.00	55.81	21.37	43.47	10.94	15.05	79.26	81.26	80.05	52.18	76.33	87.92	41.67	35.48	93.14	83.31	27.33	31.50	134.06	92.84	31.67	50.11	134.40	86.73	28.51	50.60
SO2	27.45	4.52	0.00	8.86	96.35	195.96	85.36	67.84	13.13	14.18	13.97	9.11	313.56	361.18	171.18	145.75	510.10	472.30	175.31	162.51	1549.36	1072.96	366.03	579.10	1571.03	1013.85	333.24	591.54
SO4	9.61	1.59	0.00	3.10	1.62	3.30	1.44	1.14	4.58	4.95	4.88	3.18	5.29	6.09	2.89	2.46	8.60	7.96	2.96	2.74	41.06	28.43	9.70	15.35	107.34	120.90	39.73	70.54
CO	26.38	4.34	0.00	8.52	2.05	4.17	1.82	1.44	20.04	22.50	22.16	14.45	0.93	1.08	0.51	0.43	10.86	10.06	3.73	3.46	41.06	28.43	9.70	15.35	41.63	26.86	8.84	15.67
PM	94.93	9.05	0.00	17.74	3.42	6.96	3.03	2.41	43.07	47.37	46.46	30.41	11.13	12.82	6.08	5.17	18.11	16.76	6.23	5.77	172.88	119.71	40.84	64.62	175.29	113.12	37.10	66.01

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

December 6, 1991

Mr. J.A. Ruhl, Manager
Health, Safety and Environment
Shell Western E&P, Inc.
West Coast Production Division
P.O. Box 11164
Bakersfield, CA 93389-1164

SUBJECT: Application #'s 4013003/101/201/301/401/601 - Project # 910706
In reply refer to ATC #'s & Project #

Dear Mr. Ruhl:

This office has received your applications for Emission Reduction Credit Banking Certificates the following: For Conversion of Steam Generators to Gas-Fired Only. They have been reviewed by our staff, additional information has been requested, and you have submitted additional information. Based on your submittal, your applications have been found to be complete; i.e., you have submitted enough information to enable the District to initiate its review of your project.

Please be advised that during the course of review, the District may request additional information for the purpose of clarifying, amplifying, correcting or otherwise supplementing the information on file.

Thank you for your cooperation in filing the necessary applications. Should you have any questions please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
AIR POLLUTION CONTROL OFFICER (SED)
ASST. AIR POLLUTION CONTROL OFFICER (SJVUAPCD)

Lance Ericksen

Thomas Paxson, P.E.
Manager, Engineering Division

LE/cs

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

September 30, 1991

Mr. J. A. Ruhl, Manager
Health, Safety & Environment
Shell Western E & P Inc.
West Coast Production Division
P.O. Box 11164
Bakersfield, CA 93389-1164

SUBJECT: **ERC Application #'s 4013003/101/201/301/401/601 - Project #910706**
In reply refer to ERC #'s & Project #

Dear Mr. Ruhl:

Your applications for Emission Reduction Banking Certificates for the following project have been received by this office: ERC Banking Credits for Conversion of Generators to Gas Fired Only.

After reviewing this application, our office sent you a list of deficiencies which had to be corrected before processing could commence (see attached copy). These items are necessary to satisfy the requirements of Rule 210.3/230.1 of the District's Rules and Regulations.

Because we have not received sufficient information from you, this office will have no choice but to deny your applications for ERC Banking Certificates within thirty days should you still not supply the required information.

Because the requested information was not received prior to September 19, 1991, any further processing of the applications must be under the SJVUAPCD Banking and NSR rules adopted on that date. Therefore, in order to proceed with the applications, the District will required:

1. Actual historical fuel use and corresponding emissions by calendar quarter for the two years preceding the date of application.

2. Additional fees of $350. Under the SJVUAPCD Rules adopted September 19, 1991, fees for banking certificate applications are $650. This fee is for all air contaminants and additional fees may be requested by the District if the actual time and materials exceed the initial fee amount. Because you have previously paid $300, the balance due before processing can proceed is $350.

Submission of the above information within 30 days will enable the District to proceed with processing of the applications.

Thank you for your cooperation in this matter. Should you have any questions, please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
Air Pollution Control Officer (SED)
Asst. Air Pollution Control Officer (SJVUAPCD)

for Lance Ericksen

Thomas Paxson, P.E.
Manager, Engineering Division

LE/bd
Attachment

RESOURCE MANAGEMENT AGENCY

RANDALL L. ABBOTT
DIRECTOR

DAVID PRICE III
ASSISTANT DIRECTOR

Air Pollution Control District
WILLIAM J. RODDY, APCO

Environmental Health Services Department
STEVE McCALLEY, REHS, DIRECTOR

Planning & Development Services Department
TED JAMES, AICP, DIRECTOR

AIR POLLUTION CONTROL DISTRICT

August 13, 1991

Mr. J. A. Ruhl, Manager
Health, Safety & Environment
West Coast Production Division
Shell Western E & P Inc.
P.O. Box 11164
Bakersfield, CA 93389-1164

SUBJECT: **Application #'s 4013003/101/201/301/401/601 - Project #910706**
In reply refer to Application #'s & Project #

Dear Mr. Ruhl:

Your applications for Emission Reduction Banking Certificates for the following project have been received by this office: ERC Banking Credits for conversion of generators to gas fired only.

A preliminary review of these applications revealed that they are incomplete and that the following information will be required before processing can commence:

1. Documentation that reductions have actually occurred, i.e., that oil firing has ceased,

2. Fuel use data for two years preceding date of application and corresponding emissions.

Please be advised that failure to provide the necessary information within thirty days may result in denial of the requested Authority to Construct. Thank you for your cooperation in this matter. Should you have any questions, please telephone Mr. Lance Ericksen of the Engineering Evaluation Section at (805) 861-3682.

Sincerely,

WILLIAM J. RODDY
Air Pollution Control Officer (SED)
Asst. Air Pollution Control Officer (SJVUAPCD)

for Thomas Paxson, P.E.
Manager, Engineering Division

LE/bd

KERN COUNTY AIR POLLUTION CONTROL DISTRICT 4013003/101

2700 "M" Street, Suite 275 Bakersfield, California 93301 Telephone: (805) 861-3682

APPLICATION FOR:

- ☐ Authority to Construct (ATC)
- ☐ ATC — Modification
- ☐ ATC — Renewal
- ☐ Permit to Operate (PTO)
- ☐ PTO — Modification
- ☐ PTO — Transfer of Ownership
- ☒ Banking Certificate
- ☐ Transfer of Location

AN APPLICATION IS REQUIRED FOR EACH SOURCE OPERATION AS DEFINED IN RULE 102, SECTION cc.

1. PERMIT TO BE ISSUED TO: Name of organization to operate the following equipment:
   Shell Western E&P Inc.

2. MAILING ADDRESS:
   P.O. Box 11164, Bakersfield, CA Zip Code: 93389-1164

3. LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED:
   Section 32, T 27S, R 28S, POSO CREEK Field, MIDWAY PREMIER Lease

4. GENERAL NATURE OF BUSINESS:
   Crude Oil and Gas Production

5. EQUIPMENT FOR WHICH APPLICATION IS MADE:

   PTO Numbers 4013003 MIDWAY PREMIER #2 GENERATORS

   Request for Banking Certificate for Emission Reduction Credits in conjunction with the surrender of oil fired capability.

   Emmission Reduction Credits are requested in the following amount as per attached calculations:

   Total PM Credits: 10.02 lb/day

   Provide additional information as required by District "Instructions".

6. TYPE AND ESTIMATED COST OF AIR POLLUTION CONTROL EQUIPMENT:

7. TYPE AND ESTIMATED COST OF BASIC PROCESS EQUIPMENT:

8. SIGNATURE OF APPLICANT:	TITLE OF SIGNER: Manager Health, Safety & Environment West Coast Production Division	
9. TYPE OR PRINT NAME OF SIGNER: For J.A. Ruhl	DATE: 6/13/91	PHONE NO.: (805) 326-5900

DATE RECEIVED
RECEIVED
JUL 9 1991
KERN COUNTY AIR POLLUTION CONTROL DISTRICT

Validation (For APCD Use Only)

FILING FEE: $60.00/440.00 RECEIPT NO.: 011216

DATE: 7/9/91

Air Quality 520 9149 011 (Rev. 3/88)

KERN COUNTY AIR POLLUTION CONTROL DISTRICT 4013003/1601

2700 "M" Street, Suite 275 Bakersfield, California 93301 Telephone: (805) 861-3682

APPLICATION FOR:

- ☐ Authority to Construct (ATC)
- ☐ ATC — Modification
- ☐ ATC — Renewal
- ☐ Permit to Operate (PTO)
- ☐ PTO — Modification
- ☒ PTO — Transfer of Ownership
- ☒ Banking Certificate
- ☐ Transfer of Location

AN APPLICATION IS REQUIRED FOR EACH SOURCE OPERATION AS DEFINED IN RULE 102, SECTION cc.

1. PERMIT TO BE ISSUED TO: Name of organization to operate the following equipment:
   Shell Western E&P Inc.

2. MAILING ADDRESS:
   P.O. Box 11164, Bakersfield, CA Zip Code: 93389-1164

3. LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED:
   Section 32, T 27S, R 28E, POSO CREEK Field, MIDWAY PREMIER Lease

4. GENERAL NATURE OF BUSINESS:
   Crude Oil and Gas Production

5. EQUIPMENT FOR WHICH APPLICATION IS MADE:
   PTO Numbers 4013003 MIDWAY PREMIER #2 GENERATOR

   Request for Banking Certificate for Emission Reduction Credits in conjunction with the surrender of oil fired capability.

   Emmission Reduction Credits are requested in the following amount as per attached calculations:

   Total CO Credits: 7.22 lb/day

   Provide additional information as required by District "Instructions".

6. TYPE AND ESTIMATED COST OF AIR POLLUTION CONTROL EQUIPMENT:

7. TYPE AND ESTIMATED COST OF BASIC PROCESS EQUIPMENT:

8. SIGNATURE OF APPLICANT:	TITLE OF SIGNER: Manager Health, Safety & Environment West Coast Production Division	
9. TYPE OR PRINT NAME OF SIGNER: For J.A. Ruhl	DATE: 6/13/91	PHONE NO.: (805) 326-5900

DATE RECEIVED	Validation (For APCD Use Only)
RECEIVED JUL 9 1991 KERN COUNTY AIR POLLUTION CONTROL DISTRICT	FILING FEE: $60.00 / 440.00 RECEIPT NO.: 011216 DATE: 7/9/91

Air Quality 580 9149 011 (Rev. 3/88)

KERN COUNTY AIR POLLUTION CONTROL DISTRICT 4013003/301

2700 "M" Street, Suite 275 Bakersfield, California 93301 Telephone: (805) 861-3682

APPLICATION FOR:

- ☐ Authority to Construct (ATC)
- ☐ Permit to Operate (PTO)
- ☒ Banking Certificate
- ☐ ATC — Modification
- ☐ PTO — Modification
- ☐ Transfer of Location
- ☐ ATC — Renewal
- ☐ PTO — Transfer of Ownership

AN APPLICATION IS REQUIRED FOR EACH SOURCE OPERATION AS DEFINED IN RULE 102, SECTION cc.

1. PERMIT TO BE ISSUED TO: Name of organization to operate the following equipment:
   Shell Western E&P Inc.

2. MAILING ADDRESS:
   P.O. Box 11164, Bakersfield, CA Zip Code: 93389-1164

3. LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED:
   Section 32, T 27S, R 28E, POSO CREEK Field, MIDWAY PREMIER Lease

4. GENERAL NATURE OF BUSINESS:
   Crude Oil and Gas Production

5. EQUIPMENT FOR WHICH APPLICATION IS MADE:

   PTO Numbers 4013003 MIDWAY PREMIER #2 GENERATOR

   Request for Banking Certificate for Emission Reduction Credits in conjunction with the surrender of oil fired capability.

   Emmission Reduction Credits are requested in the following amount as per attached calculations:

   Total SO4 Credits: 5.67 lb/day

Provide additional information as required by District "Instructions".

6. TYPE AND ESTIMATED COST OF AIR POLLUTION CONTROL EQUIPMENT:

7. TYPE AND ESTIMATED COST OF BASIC PROCESS EQUIPMENT:

8. SIGNATURE OF APPLICANT:	TITLE OF SIGNER: Manager Health, Safety & Environment West Coast Production Division	
9. TYPE OR PRINT NAME OF SIGNER: for J.A. Ruhl	DATE: 6/13/91	PHONE NO.: (805) 326-5900

DATE RECEIVED
RECEIVED
JUL 9 1991
KERN COUNTY AIR POLLUTION CONTROL DISTRICT

Validation (For APCD Use Only)

FILING FEE: $60.00/140.00 RECEIPT NO.: 01126

DATE: 7/9/91

Quality 580 9149 011 (Rev. 3/88)

KERN COUNTY AIR POLLUTION CONTROL DISTRICT 4013003/201

2700 "M" Street, Suite 275 Bakersfield, California 93301 Telephone: (805) 861-3682

APPLICATION FOR:

- ☐ Authority to Construct (ATC)
- ☐ ATC — Modification
- ☐ ATC — Renewal
- ☐ Permit to Operate (PTO)
- ☐ PTO — Modification
- ☐ PTO — Transfer of Ownership
- ☒ Banking Certificate
- ☐ Transfer of Location

AN APPLICATION IS REQUIRED FOR EACH SOURCE OPERATION AS DEFINED IN RULE 102, SECTION cc.

1. PERMIT TO BE ISSUED TO: Name of organization to operate the following equipment:

Shell Western E&P Inc.

2. MAILING ADDRESS:

P.O. Box 11164, Bakersfield, CA Zip Code: 93389-1164

3. LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED:

Section 32, T27S , R28E , POSO CREEK Field, MIDWAY PREMIER Lease

4. GENERAL NATURE OF BUSINESS:

Crude Oil and Gas Production

5. EQUIPMENT FOR WHICH APPLICATION IS MADE:

PTO Numbers 4013003 MIDWAY PREMIER #2 GENERATOR

Request for Banking Certificate for Emission Reduction Credits in conjunction with the surrender of oil fired capability.

Emmission Reduction Credits are requested in the following amount as per attached calculations:

Total SO2 Credits: 349.68 lb/day

Provide additional information as required by District "Instructions".

6. TYPE AND ESTIMATED COST OF AIR POLLUTION CONTROL EQUIPMENT:

7. TYPE AND ESTIMATED COST OF BASIC PROCESS EQUIPMENT:

8. SIGNATURE OF APPLICANT:	TITLE OF SIGNER: Manager Health, Safety & Environment West Coast Production Division	
9. TYPE OR PRINT NAME OF SIGNER: For J.A. Ruhl	DATE: 6/13/91	PHONE NO.: (805) 326-5900

DATE RECEIVED

JUL 9 1991

KERN COUNTY AIR POLLUTION CONTROL DISTRICT

Validation (For APCD Use Only)

FILING FEE: $ 60^{ai}/440^{ao} RECEIPT NO.: 01126

DATE: 7/9/91

Air Quality 580 9149 011 (Rev. 3/88)

KERN COUNTY AIR POLLUTION CONTROL DISTRICT 4013003/401

2700 "M" Street, Suite 275 Bakersfield, California 93301 Telephone: (805) 861-3682

APPLICATION FOR:

- ☐ Authority to Construct (ATC)
- ☐ ATC – Modification
- ☐ ATC – Renewal
- ☐ Permit to Operate (PTO)
- ☐ PTO – Modification
- ☐ PTO – Transfer of Ownership
- ☒ Banking Certificate
- ☐ Transfer of Location

AN APPLICATION IS REQUIRED FOR EACH SOURCE OPERATION AS DEFINED IN RULE 102, SECTION cc.

1. PERMIT TO BE ISSUED TO: Name of organization to operate the following equipment:
   Shell Western E&P Inc.

2. MAILING ADDRESS:
   P.O. Box 11164, Bakersfield, CA Zip Code: 93389-1164

3. LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED:
   Section 32 , T27S , R28E , POSO CREEK Field, MIDWAY PREMIER Lease

4. GENERAL NATURE OF BUSINESS:
   Crude Oil and Gas Production

5. EQUIPMENT FOR WHICH APPLICATION IS MADE:
   PTO Numbers 4013003 MIDWAY PREMIER #2 GENERATOR

   Request for Banking Certificate for Emission Reduction Credits in conjunction with the surrender of oil fired capability.

   Emmission Reduction Credits are requested in the following amount as per attached calculations:

   Total NOx Credits: 46.39 lb/day

   Provide additional information as required by District "Instructions".

6. TYPE AND ESTIMATED COST OF AIR POLLUTION CONTROL EQUIPMENT:

7. TYPE AND ESTIMATED COST OF BASIC PROCESS EQUIPMENT:

8. SIGNATURE OF APPLICANT: J. A. Ruhl
   TITLE OF SIGNER: Manager Health, Safety & Environment West Coast Production Division

9. TYPE OR PRINT NAME OF SIGNER: For J.A. Ruhl
   DATE: 6/13/91
   PHONE NO.: (805) 326-5900

DATE RECEIVED
RECEIVED
JUL 9 1991
KERN COUNTY AIR POLLUTION CONTROL DISTRICT

Validation (For APCD Use Only)

FILING FEE: $60 w/ 440 RECEIPT NO.: 01126
DATE: 7/9/91

Air Quality 580 9149 011 (Rev. 3/88)

EMISSIONS REDUCTION CREDITS CALCULATIONS
KERN RIVER FIELD
FILENAME: KRERC.WK1

	PRICEWELL #5 PTO 4013094L 62.5 MMBTU/HR				PRICEWELL #7 PTO 4013096L 62.5 MMBTU/HR			
YEAR	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL
1989	15566	4542	0	10574	16450	5028	0	10481
1990	16299	528	0	0	15449	526	0	0
89/90 AVG/OT	15933	2535	0	5287	15950	2777	0	5241
CURRENT EMISSIONS	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL	TEST 2/21/90 LBS/DAY OIL
NOX	186.74	29.39	0.00	60.62	180.34	31.05	0.00	57.97
SO2	14.83	2.33	0.00	4.81	14.84	2.56	0.00	4.77
SO4	5.05	0.80	0.00	1.64	5.06	0.87	0.00	1.63
CO	13.73	2.16	0.00	4.46	13.75	2.37	0.00	4.42
PM	33.83	5.32	0.00	10.98	33.87	5.83	0.00	10.89
GAS FIRE EMISSIONS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS
NOX	98.86	15.56	0.00	32.09	95.47	16.44	0.00	30.69
SO2	1.11	0.18	0.00	0.36	1.11	0.19	0.00	0.36
SO4	0.25	0.04	0.00	0.08	0.25	0.04	0.00	0.08
CO	0.55	0.09	0.00	0.18	0.55	0.09	0.00	0.18
PM	6.38	1.00	0.00	2.07	6.39	1.10	0.00	2.05
EMISSIONS CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS
NOX	87.88	13.83	0.00	28.53	84.87	14.61	0.00	27.28
SO2	13.72	2.16	0.00	4.45	13.73	2.36	0.00	4.41
SO4	4.80	0.76	0.00	1.56	4.81	0.83	0.00	1.54
CO	13.18	2.07	0.00	4.28	13.20	2.27	0.00	4.24
PM	27.45	4.32	0.00	8.91	27.48	4.73	0.00	8.83

	MIDWAY PREMIER MP-2 PTO 4013003E 23.0 MMBTU/HR				Mc MANUS T-1 PTO 40130016 25.2 MMBTU/HR			
YEAR	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL
1989	4307	4521	4400	3835	1429	0	0	1785
1990	3764	4879	104	0	1051	5100	2246	0
89/90 AVG/OT	4036	4700	2252	1918	1240	2550	1123	893
CURRENT EMISSIONS	TEST 2/14/86 LBS/DAY OIL	TEST 2/14/86 LBS/DAY OIL	TEST 2/14/86 LBS/DAY OIL	TEST 2/14/86 LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL
NOX	116.02	133.64	63.34	53.93	32.49	66.07	28.78	22.07
SO2	314.39	362.14	171.63	146.14	96.60	196.48	85.59	68.02
SO4	5.56	6.41	3.04	2.59	1.71	3.48	1.51	1.20
CO	0.97	1.12	0.53	0.45	2.14	4.35	1.89	1.50
PM	13.91	16.02	7.59	6.47	4.27	8.69	3.79	3.01
GAS FIRE EMISSIONS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS
NOX	39.69	45.72	21.67	18.45	11.11	22.60	9.83	7.03
SO2	0.83	0.96	0.46	0.39	0.26	0.52	0.23	0.18
SO4	0.28	0.32	0.15	0.13	0.09	0.17	0.08	0.06
CO	0.04	0.04	0.02	0.02	0.09	0.17	0.08	0.06
PM	2.78	3.20	1.52	1.29	0.85	1.74	0.76	0.60
EMISSIONS CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS
NOX	76.33	87.92	41.67	35.48	21.37	43.47	18.94	15.05
SO2	313.56	361.18	171.18	145.75	96.35	195.96	85.36	67.84
SO4	5.29	6.09	2.89	2.46	1.62	3.30	1.44	1.14
CO	0.93	1.08	0.51	0.43	2.05	4.17	1.82	1.44
PM	11.13	12.82	6.08	5.17	3.42	6.96	3.03	2.41

	RAMBLER 66 PTO 4013072H 22.0 MMBTU/HR				RAMBLER 613 PTO 4013002F 23.0 MMBTU/HR			
YEAR	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL
1989	1911	458	0	821	4976	2218	0	3455
1990	1619	3369	2092	0	4624	6247	2526	0
89/90 AVG/OT	1765	1914	1046	411	4800	[illegible]	1263	1728
CURRENT EMISSIONS	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL	TEST N/A LBS/DAY OIL
NOX	15.82	16.96	9.17	3.60	125.75	109.67	32.37	44.27
SO2	137.51	147.44	79.72	31.29	373.95	326.12	96.26	131.66
SO4	2.43	2.61	1.41	0.55	6.62	5.77	1.70	2.33
CO	3.04	3.26	1.76	0.69	8.27	7.22	2.13	2.91
PM	6.08	6.52	3.53	1.38	16.55	14.43	4.26	5.83
GAS FIRE EMISSIONS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS
NOX	5.41	5.80	3.14	1.23	43.02	37.52	11.07	15.15
SO2	0.37	0.39	0.21	0.08	0.99	0.87	0.26	0.35
SO4	0.12	0.13	0.07	0.03	0.33	0.29	0.09	0.12
CO	0.12	0.13	0.07	0.03	0.33	0.29	0.09	0.12
PM	1.22	1.30	0.71	0.28	3.31	2.89	0.85	1.17
EMISSIONS CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS
NOX	10.41	11.16	6.03	2.37	82.73	72.15	21.30	29.13
SO2	137.14	147.05	79.51	31.20	372.96	325.25	96.00	131.31
SO4	2.31	2.48	1.34	0.53	6.29	5.48	1.62	2.21
CO	2.92	3.13	1.69	0.66	7.94	6.93	2.04	2.80
PM	4.87	5.22	2.82	1.11	13.24	11.54	3.41	4.66

TOTAL EMISSIONS CREDITS / OT	10 LBS/DAY CREDITS	20 LBS/DAY CREDITS	30 LBS/DAY CREDITS	40 LBS/DAY CREDITS
NOX	363.58	243.14	87.93	137.83
SO2	947.46	1033.96	432.05	384.97
SO4	25.12	18.94	7.28	9.44
CO	40.23	19.65	6.07	13.06
PM	87.58	45.39	15.37	31.09

EMISSIONS REDUCTION CREDITS CALCULATIONS
NT POSD FIELD
FILENAME: NTPERC1

	SHAPIRO NPB-1 PTO 4013026E 62.5 MMBTU/HR				SECURITY C-5 PTO 4013032E 62.5 MMBTU/HR				SECURITY C-7 PTO 4013005E 62.5 MMBTU/HR				GLIDE B-3 PTO 4013081L 62.5 MMBTU/HR				GLIDE B-7 PTO 4013020J 62.5 MMBTU/HR			
YEAR	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL	10 BBLS OIL	20 BBLS OIL	30 BBLS OIL	40 BBLS OIL
1989	16972	17322	17376	16519	16996	4882	0	10164	16351	4282	0	11277	16692	3874	0	10343	15363	4898	0	11660
1990	14843	17413	17215	6020	14024	16997	7484	1089	15314	17732	7654	1421	15798	16677	6719	1098	15709	16826	7063	1364
89/90 AVG/QT	15908	17368	17296	11274	15510	10940	3742	5626	15833	11007	3827	6349	16245	9876	3360	5721	15536	10862	3532	6512
CURRENT EMISSIONS	TEST 3/28/90 LBS/DAY OIL	TEST 3/28/90 LBS/DAY OIL	TEST 3/28/90 LBS/DAY OIL	TEST 3/28/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 2/23/90 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL	NOx TEST 4/4/89 LBS/DAY OIL
NOX	197.30	213.04	209.05	136.79	173.98	121.36	41.06	61.74	177.49	122.04	41.97	69.63	180.10	108.28	36.45	62.04	172.24	119.10	38.30	70.62
SO2	13.27	14.33	14.11	9.20	769.92	537.07	181.71	273.20	785.93	540.30	185.84	309.31	806.40	484.83	163.14	277.79	771.21	533.26	171.49	316.23
SO4	4.83	5.21	5.13	3.35	21.39	14.92	5.05	7.59	21.83	15.01	5.16	8.56	100.80	60.60	20.39	34.72	96.40	66.66	21.44	39.53
CO	21.93	23.68	23.33	15.21	21.39	14.92	5.05	7.59	21.83	15.01	5.16	8.56	22.40	13.47	4.53	7.72	21.42	14.81	4.76	8.78
PM	50.04	59.21	58.33	38.02	96.24	67.13	22.71	34.13	98.24	67.55	23.23	38.54	100.80	60.60	20.39	34.72	96.40	66.66	21.44	39.53
GAS FIRE EMISSIONS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS	LBS/DAY GAS
NOX	122.04	131.78	129.81	84.61	107.62	75.07	25.40	38.19	109.79	75.49	25.96	43.07	111.40	66.98	22.56	38.38	106.54	73.67	23.69	43.69
SO2	8.19	8.15	8.15	8.19	3.21	2.24	0.76	1.14	3.27	2.25	0.77	1.28	7.36	2.02	0.68	1.16	3.21	2.22	0.71	1.32
SO4	0.24	0.26	0.26	0.17	1.07	0.75	0.25	0.38	1.09	0.75	0.26	0.43	5.04	3.03	1.02	1.74	4.82	3.33	1.07	1.98
CO	1.10	1.18	1.17	0.76	1.07	0.75	0.25	0.38	1.09	0.75	0.26	0.43	1.12	0.67	0.23	0.39	1.07	0.74	0.24	0.44
PM	10.97	11.84	11.67	7.60	10.69	7.46	2.52	3.79	10.92	7.51	2.58	4.28	11.20	6.73	2.27	3.86	10.71	7.41	2.38	4.39
EMISSIONS CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS	LBS/DAY CREDITS
NOX	75.26	81.26	80.05	52.18	66.36	46.29	15.66	23.53	67.70	46.55	16.01	26.56	68.70	41.30	13.90	23.66	65.70	45.43	14.61	26.94
SO2	13.13	14.18	13.97	9.11	766.71	534.83	180.96	272.07	782.65	538.13	185.07	307.83	803.04	482.81	162.46	276.63	767.99	531.04	170.78	314.91
SO4	4.58	4.95	4.88	3.18	20.32	14.17	4.80	7.21	20.74	14.26	4.90	8.14	95.76	57.57	19.37	32.99	91.58	63.33	20.34	37.55
CO	20.84	22.50	22.16	14.45	20.32	14.17	4.80	7.21	20.74	14.26	4.90	8.14	21.28	12.79	4.31	7.33	20.35	14.07	4.53	8.34
PM	43.87	47.37	46.66	30.41	85.55	59.67	20.19	30.34	87.33	60.04	20.65	34.26	89.60	53.87	18.13	30.87	85.69	59.25	19.05	35.14

TOTAL EMISSIONS CREDITS / QT	10 LBS/DAY CREDITS	20 LBS/DAY CREDITS	30 LBS/DAY CREDITS	40 LBS/DAY CREDITS
NOX	343.72	260.84	140.23	152.89
SO2	3133.53	2101.00	713.23	1179.74
SO4	232.98	154.28	54.31	89.06
CO	103.53	77.00	40.69	45.47
PM	392.03	288.21	124.40	161.03

Projects 910703-910709

Shell Western Exploration and Production Inc. SJ Division

Mailing address:

P.O. Box 11164
Bakersfield, CA 93389

Phone:

(805) 326-5442

Company Contact:

Eileen Lindsay
Environmental Engineer

Processing Engineer:

Lance Ericksen
Air Quality Engineer

Project:

4013 910703-910709

Start date: 7/9/91
Finish date: 1/30/92
Deemed comp: 12/6/91
WP File 92LE004
Final Review Not Req.

Project Location:

Central Kern County Oilfields

INDEX

I. Proposed Emission Reduction Credit

The applicant is requesting emission reduction credits for the conversion of 11 steam generators from dual firing to gas fired only. Credits are requested for reductions in PM10, SO2, SO4, NO2 and CO.

II. Rules and Regulations

A. Rule 220.1 Requirements: (9-19-91 SJVUAPCD)

1. Subsection II - Definitions

A. Actual Emissions: measured or estimated emissions which most accurately represent the emissions from an emissions unit.

B. Actual Emissions Reductions: the reductions of Actual Emissions from an emissions unit selected for emission offsets or banking, from the baseline period. Actual emissions reductions shall be calculated pursuant to Section V of this rule and meet the following criteria:

1. shall be real, enforceable, quantifiable, and permanent; and

2. (considerations for early implementation of BARCT), and

3. shall be in excess of any emissions reduction which at the time the application for an Authority to Construct is deemed complete is:

a. required or encumbered by any laws, rules, regulations, agreements, orders, (This provision does not include controls required by this rule.); or

b. attributed to a control measure noticed for workshop, or proposed or contained in a state implementation plan, except for reductions outlined in Subsection II.B.2. (This provision does not include controls required by this rule.); or

c. proposed in the district's adopted air quality plan for attaining the reductions required by the California Clean Air Act except for reductions outlined in Subsection II.B.2.

II. Rules and Regulations (Cont.)

A. Rule 220.1 Requirements: (9-19-91 SJVUAPCD) (Cont.)

1. Subsection II - Definitions (Cont.)

F. Baseline Period shall be either 1) two consecutive years of operation immediately prior to the submission of the complete application; 2) another tim period of at least two consecutive years within five years immediately prior to the submission of the complete application determined by the Control Officer as more representative of normal source operation; 3) a shorter period of at least one year in cases where the emissions unit has not been in operation for two years so long as this represents the full operation history of the stationary source; 4) emission units which have been in operation for less than one year shall have no baseline period for determining actual emission reductions.

2. Subsection V - Calculations

General

(calculation procedures) .... shall be performed separately for each pollutant, and for each emissions unit .... All calculations shall be performed on a quarterly basis, unless specified otherwise.

B. Terms

HAE = Historical Actual Emissions .... emissions which have actually occurred .... must be discounted for reductions required or encumbered by laws, rules etc and ... control measures noticed for workshop or proposed in the AQIA

IPE = Increase in Permitted Emissions

PE = Potential to Emit from the new or modified emissions unit

HAPE = Historical Adjusted Potential Emissions shall be the potential to emit prior to modification adjusted for the proposed control efficiency.

HAPE = PEPM (1 - CE)

PEPM = Potential to Emit from the emissions unit prior to modification

CE = Control Efficiency of the proposed air pollution control technology.

IPE = PE (for modified unit) - HAPE (modified unit prior to modification)

II. Rules and Regulations (Cont.)

A. Rule 220.1 Requirements: (9-19-91 SJVUAPCD) (Cont.)

2. Subsection V - Calculations (Cont.)

D.3.b. IPE for Modification of Emissions Unit

IPE = PE(for modified unit) - HAPE(modified unit prior to modification)

Subsection V.E. General

If the actual emissions reductions, after 10% deduction for community bank allowance, are greater than the increase in permitted emissions, the difference can be banked. Actual emission reductions are positive numbers. All negative numbers calculated using these procedures shall be set to zero.

Subsection V.E.1. Actual emission reductions solely due to reduction in operating hours and/or throughput rates.

AER = (HAE - PE)

Subsection V.E.2. Actual emission reductions due to shutdown

AER = HAE

Subsection V.E.3. Actual Emission Reductions due to installation of a control device or more efficient process or material.

AER = (HAE * CE)

the potential to emit after modification shall be equal to potential to emit prior to modification times 1 minus the control efficiency; or

PE (after modification = PEPM * (1-CE)

C. Subsection VI. - Community Bank Allowance

Subsection VI.B.

The community bank is funded by preserving a portion of all Actual Emission Reductions calculated in accordance with Subsection V.E. of this rule, and shall be funded by the following:

1. 10 percent of all onsite actual emissions reductions since August 22, 1989.

2. 10 percent of all onsite actual emissions reductions created after the date of adoption of this rule.

II. Rules and Regulations (Cont.)

B. Rule 230.1 Requirements: (9-19-91 SJVUAPCD)

1. Subsection III - Definitions

c. Bankable Emission Reductions - emission reductions of pollutants and their precursors for which ambient air quality standards exist, and which meet the provisions of this Rule. Such reductions may be deposited in the District's ERC Bank. Once banked and certified, the emission reductions become Emission Reduction Credits (ERCs).

g. Emission Reduction Credits (ERCs): reductions of actual emissions emission unit recognized by the District as available for use as tradeoffs or offsets in accordance with the requirements of this Rule. To be eligible for certification as ERCs, emissions reductions must be real, surplus, permanent, quantifiable and enforceable. All emission reduction meeting these requirements may be certified as ERCs.

2. Subsection IV. - Eligibility of Emission Reductions

B. Emissions Reductions Occurring After September 19, 1991

For emission reductions occurring after the September 19, 1991, the following criteria must be met in order to deem such reductions eligible for banking:

1. The emission reduction are real, surplus, permanent, quantifiable, and enforceable.

2. Actual emission reductions are calculated in accordance with the calculation procedures of the District's New Source Review Rule and comply with the definition of Actual Emission Reductions of the District's New Source Review Rule. Adjustment to emissions reductions for the community bank shall be made at the time the reductions a quantified pursuant to the District's New Source Review Rule.

3. An application for ERC has been filed no later than 180 days after the emission reductions occurred.

II. Rules and Regulations (Cont.)

B. Rule 230.1 Requirements: (9-19-91 SJVUAPCD) (Cont.)

2. Subsection IV. - Eligibility of Emission Reductions (Cont.)

4. For non-permitted emission units emissions must have been included in the 1987 emissions inventory and the source creating ERCs shall apply for and acquire a Permit to Operate subject to enforceable permit conditions which ensures that the emission reductions will be provided in accordance with the provisions of this rule, and shall continue for the reasonably expected life of the proposed stationary source. If the district, pursuant to state laws, is prohibited to permit the emission unit, the stationary source creating ERC's shall execute a legal binding contract with the District which ensures that the emission reductions will be provided in accordance with the provisions of this rule, and shall continue for the reasonably expected life of the proposed source.

3. Subsection V - ERC Certificate Application Procedures:

E. Applications for reduction certificates shall be submitted within 180 days after the emission reduction occurs. For reductions covered under IV.A., ERC Certificate applications shall be submitted within 180 days of the adoption date of this rule (9-19-91).

4. Subsection VI - Registration of ERC Certificates:

A. May only grant ERC Certificates after the emissions reductions have occurred upon satisfaction of the following provisions:

1. A revised P to O has been issued if the emission reductions were created as a result of greater operating efficiencies or from application of more efficient control technology.

2. If the reductions were created due to shutdown of a permitted emissions unit, the relevant P to O has been surrendered and voided.

G. Delivery by the District of an ERC Certificate shall be accomplished by person or by registered mail.

II. Rules and Regulations (Cont.)

C. Other Applicable Rules and Regulations

Rule 424 - Sulfur Compound Emissions - emissions from existing steam generator shall not exceed 0.11 lbm sulfur per million BTU of heat input on a field wide average basis - excluding small steam generators up to a total of 165 million BTU per hour of heat input operated by a small producer

Rule 425.1 - NOX Emissions from Steam Generators Used in TEOR Central Stationary Source - large existing NOX emissions from existing steam generators in NO_2 per million BTU of heat input shall not exceed; 0.35 oil fired 0.14 gas fired for large existing steam generators which operated by small producers, 0.20 oil fired 0.14 gas fired for large steam generators operated by producers other than small producers or 0.38 oil fired 0.18 gas fired for small steam generators

SLC plan requirements - These generators are subject to the SLC requirements of Rule 220.1 and must comply with the District policy referenced in Subsection II.GG. of Rule 220.1.

III. ERC Validation

A. Rule 220.1 Requirements

1. These steam generators have been in operation under valid permit to operate, actual fuel use data and source test emission factors have been used provided to document emissions. This data has been used to calculate emissions pursuant to Rule 220.1 Subsection V. the reductions therefore satisfy the Requirements of Rule 220.1 Subsections II.a. and II.b.

2. The baseline period used in emission calculations is the two consecutive years preceding the date of complete application. Therefore the baseline period is consistent with Rule 220.1 Subsection II.F. and the reductions are based on historical actual emissions.

3. The calculations have been preformed on a quarterly basis for each air contaminant. The reductions are due to the addition of emissions controls and have been calculated according to Subsection V.E.3. Therefore calculations satisfy the requirements of Rule 220.1 Subsection V.

4. The emission reductions occurred after August 22, 1989 therefore 10% of reductions should be deposited to the community bank pursuant to Subsection VI.B.1. The amount of credit available to be banked by the source will be reduced by 10% for the community bank. The calculation of emission reductions is therefore consistent with the Requirements of Rule 220.1 subsection VI. community bank.

B. Rule 230.1 Requirements

Subsection IV. Requirements

1. These emissions reductions are authorized by authority to construct issued after September 19, 1991. The applicant has notified the District that these ATCs have been implemented and a new permit to operate may be issued. Therefore the reductions occurred after September 19, 1991 and may be banked subject to the requirements of Subsection IV.B.

2. To be eligible for banking reductions Subsection V.B.1. requires such reductions be real, surplus, permanent, quantifiable and enforceable:

III. ERC Validation Cont.

B. Rule 230.1 Requirements Cont.

Real: The reductions have actually occurred as authorized by ATC oil firing has ceased and an new permit prohibiting oil firing is being prepared. Emissions have been calculated using representative source test emission factors and actual fuel use data. The applicant has submitted acural fuel use for each quarter and has indicated that the original records are available upon request. Therefore the reductions are real.

Surplus: A review of District records shows the reductions have not previously been used as tradeoffs or offsets. No District, State or Federal law, regulation or agreement require these reductions. The SJVUAPCD draft AQIA plan includes proposed control measures that may impact oil fired fuel burning equipment. However, the AQIA plan was not adopted when these applications were deemed complete. Therefore the reductions are surplus.

Permanent: These reductions are the result of conversion to gas firing only. This type of reduction is not dependant on control efficiency of post combustion equipment and is not expected to change over time. The steam generators will continue to serve the same function and no emissions will be transferred to other equipment. Because these steam generators are included in the Rule 424 average compliance plan they must be maintained at there oil fired level to insure permanence. Therefore the reductions are permanent.

Quantifiable: The emission reductions have been calculated using representative source test emission factors for each steam generator when oil firing, the proposed gas firing factors have been documented by source tests of similar equipment. Historic actual emissions are based on actual fuel use for two years. The emissions reductions may therefore be quantified for theses specific emissions units. Therefore the reductions are quantifiable.

Enforceable: The steam generators will be issued new permits to operate which require gas firing only. Annual District inspection of this equipment, record keeping and compliance testing as required by District policy and permitting actions will insure the reductions are enforceable.

III. ERC Validation Cont.

B. Rule 230.1 Requirements Cont.

2. Rule 230.1 subsection IV.B.2. requires the calculation of actual emission reductions be in accordance with Rule 220.1. The emission calculations have been preformed according to the procedures in Rule 220.1 subsections V. (see Rule 220.1 requirements). Therefore the reductions meet the requirements of Rule 230.1 subsection V.B.2.

3. Rule 230.1 Subsection IV.B.3. and Subsection V require an application for reductions be submitted no later than 180 days after the reduction occurs. ATCs to remove oil firing provisions were issued 1/13/92 and have now been implemented. The application for emission reduction credits was therefore made in a timely manner.

4. Rule 230.1 subsection IV.B.4. requires that non-permitted emission units must have been included in the 1987 inventory. These steam generators are under District permit and is therefore not subject to this requirement.

5. Rule 230.1 Subsection VI requires a revised P to O be issued for reductions created as a result of greater operating efficiencies or from application of more efficient control technology. The applicant has notified the District that these ATCs have been implemented and new PTOs will be prepared. Therefore the reduction satisfy this requirement.

C. Other Rule Requirements

1. Rule 424

Theses steam generators are currently included in the applicants Rule 424 plan (sulfur compounds from oilfield steam generators). To insure the reductions in SO2 are real and permanent the generators must stay in the plan at their oil fired levels. Because Rule 424 allows averaging to meet the Rule limits reductions if the level for these generators were allowed to be reduced for Rule 424 averaging increases could occur at other emissions units and the reductions will not be real and permanent. See page 11A for a copy of the plan

2. Rule 425.1

The source test emission factors used to document actual emissions are below the rule 425.1 limit for NO2 of 0.2 lbm/MMBtu (see pages 46-56). The proposed emission factors for NO2 when gas firing are below the Rule 425.1 limit of 0.14 lbm/MMBtu and will be validated by annual source testing. Therefore no adjustments are necessary for Rule 425.1.

III. ERC Validation Cont.

C. Other Rule Requirements

3. Rule 220.1 SLC Requirements

These steam generators are included in the applicants SLC plan for the central heavy oil production stationary source. Currently each steam generator has capacity and use factors of 80% (over all 80/80 or 64%). The actual average emissions for each generator does not exceed the pounds/day in the pre-project plan (see pages 16-26 and 57-63). Therefore no adjustments to actual historical emissions are required. After the conversion to gas fired only the new potential to emit will replace the existing potential to emit for each generator in the plan (see pages 65-69 for the post-project plan. The gas fired emission factors used to quantify credits for this banking action and current rating, capacity and use factors will be used to calculate the new potential to emit. Compliance with these limits will continue to be shown for all units in the SLC plan on a daily basis.

Projects 910703 – 910709

Page 11A

SHELL WESTERN E&P INC., WEST COAST PRODUCTION DIVISION - RULE 424 PLAN, CENTRAL KERN COUNTY
Feb. 29, 1988 (Proposed)

PTO NO.	SWEPI UNIT #	FIELD	LEASE	MMBTU/ HR	FUEL TYPE	PCT S	UNCONT lbSO2/ MMBTU	SCRUBBER ATC #	UNCONT lbSO2 HR	SO2 PCT CONT	CONT. lbSO2/ HR	lbSO4/ MMBTU	lbSO4/ HR	#	lbSO2/ HR AS S	lbSO4/ HR AS S	TOTAL lbS/HR	lbS/ MMBT
4013073	R-1	KR	RAMBLER	23.0	OIL	1.1	1.130	4013092B	25.990	97.0	0.780	0.0258	0.594	#	0.390	0.198	0.588	
4013097	R-2	KR	RAMBLER	62.5	OIL	1.1	1.130	4013092B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013093	R-3	KR	RAMBLER	62.5	OIL	1.1	1.130	4013092B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	0.0
4013092	R-4	KR	RAMBLER	62.5	OIL	1.1	1.130	4013092B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013042	R-5	KR	RAMBLER	62.5	OIL	1.1	1.130	4013092B	70.625	97.0	2.119	0.0515	1.615	#	1.059	0.539	1.598	
4013072	R-6	KR	RAMBLER	22.0	OIL	1.1	1.130		24.860	0.0	24.860	0.0599	1.318	#	12.430	0.440	12.870	
4013002	R-13	KR	RAMBLER	23.0	OIL	1.1	1.130		25.990	0.0	25.990	0.0599	1.377	#	12.995	0.460	13.455	
4013106	P-3	KR	RAMBLER	62.5	GAS	N/A	0.020		1.220	0.0	1.220	0.0048	0.300	#	0.610	0.100	0.710	0.0
4013120	"HOPCO"	KR	SEC. 34	62.5	OIL	1.1	1.130		70.625	95.0	3.531	0.0515	3.219	#	1.766	1.075	2.841	
4013004	T-2	KR	KCL-10	18.5	OIL	1.1	1.130		20.905	0.0	20.905	0.0599	1.108	#	10.452	0.370	10.822	
4013006	30	KR	KCL-10	23.0	OIL	1.1	1.130		25.990	0.0	25.990	0.0599	1.377	#	12.995	0.460	13.455	
4013074	P-4	KR	PRICEWELL	22.0	OIL	1.1	1.130	4013004B	24.860	97.0	0.746	0.0258	0.568	#	0.373	0.190	0.563	
4013094	P-5	KR	PRICEWELL	62.5	OIL	1.1	1.130	4013004B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013095	P-6	KR	PRICEWELL	62.5	OIL	1.1	1.130	4013004B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013096	P-7	KR	PRICEWELL	62.5	OIL	1.1	1.130	4013004B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013098	P-8	KR	PRICEWELL	62.5	OIL	1.1	1.130	4013004B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013099	P-9	KR	PRICEWELL	62.5	OIL	1.1	1.130	4013004B	70.625	97.0	2.119	0.0258	1.615	#	1.059	0.539	1.598	
4013003	MP2	KR	MID. PREM	23.0	OIL	1.1	1.130		25.990	0.0	25.990	0.0599	1.377	#	12.995	0.460	13.455	
4013076	69	KR	BISHOP	25.0	OIL	1.1	1.130		28.250	0.0	28.250	0.0599	1.497	#	14.125	0.500	14.625	
4013423	WESTA.	KR	WESTATES	25.0	OIL	1.1	1.130		28.250	0.0	28.250	0.0599	1.497	#	14.125	0.500	14.625	
4013001	T-1	KR	MCMANUS	25.2	OIL	1.1	1.130		28.476	0.0	28.476	0.0599	1.509	#	14.238	0.504	14.742	
4013110	PL-8	KR	MCMANUS	62.5	OIL	1.1	1.130	C.E.NATCO	70.625	96.0	2.825	0.0240	1.497	#	1.412	0.500	1.912	
4013111	PL-9	KR	MCMANUS	62.5	OIL	1.1	1.130	C.E.NATCO	70.625	96.0	2.825	0.0240	1.497	#	1.412	0.500	1.912	
4013040	A-1	POSO	CLUS.A	62.5	OIL	0.7	0.720	4013042F	45.000	96.0	1.800	0.0201	1.254	#	0.900	0.419	1.319	
4013045	A-2	POSO	CLUS.A	62.5	OIL	0.7	0.720	4013042F	45.000	96.0	1.800	0.0201	1.254	#	0.900	0.419	1.319	
4013044	A-3	POSO	CLUS.A	62.5	OIL	0.7	0.720	4013042F	45.000	96.0	1.800	0.0201	1.254	#	0.900	0.419	1.319	
4013043	A-4	POSO	CLUS.A	62.5	OIL	0.7	0.720	4013042F	45.000	96.0	1.800	0.0201	1.254	#	0.900	0.419	1.319	
4013041	A-6	POSO	CLUS.A	62.5	OIL	0.7	0.720	4013042F	45.000	96.0	1.800	0.0201	1.254	#	0.900	0.419	1.319	
4013036	B-1	POSO	CLUS.B	62.5	OIL	0.7	0.720	4013022E	45.000	96.0	1.800	0.0166	1.035	#	0.900	0.346	1.246	
4013022	B-2	POSO	CLUS.B	62.5	OIL	0.7	0.720	4013022E	45.000	96.0	1.800	0.0166	1.035	#	0.900	0.346	1.246	
4013037	B-3	POSO	CLUS.B	62.5	OIL	0.7	0.720	4013022E	45.000	96.0	1.800	0.0166	1.035	#	0.900	0.346	1.246	
4013038	B-4	POSO	CLUS.B	62.5	OIL	0.7	0.720	4013022E	45.000	96.0	1.800	0.0166	1.035	#	0.900	0.346	1.246	
4013029	C-2	POSO	CLUS.C	62.5	OIL	0.7	0.720	4013029D	45.000	95.5	2.025	0.0278	1.740	#	1.013	0.581	1.594	
4013030	C-3	POSO	CLUS.C	62.5	OIL	0.7	0.720	4013029D	45.000	95.5	2.025	0.0278	1.740	#	1.013	0.581	1.594	
4013031	C-4	POSO	CLUS.C	62.5	OIL	0.7	0.720	4013029D	45.000	95.5	2.025	0.0278	1.740	#	1.013	0.581	1.594	
4013032	C-5	POSO	CLUS.C	62.5	OIL	0.7	0.720		45.000		45.000	0.0278	1.740	#	22.500	0.581	23.081	
4013033	C-6	POSO	CLUS.C	62.5	OIL	0.7	0.720	4013029D	45.000	95.5	2.025	0.0278	1.740	#	1.013	0.581	1.594	
4013085	C-7	POSO	CLUS.C	62.5	OIL	0.7	0.720		45.000		45.000	0.0278	1.740	#	22.500	0.581	23.081	
4013079	D-1	POSO	CLUS.D	62.5	OIL	0.7	0.720	4013079C	45.000	96.0	1.800	0.0231	1.441	#	0.900	0.481	1.381	
4013080	D-2	POSO	CLUS.D	62.5	OIL	0.7	0.720	4013079C	45.000	96.0	1.800	0.0231	1.441	#	0.900	0.481	1.381	
4013081	D-3	POSO	CLUS.D	62.5	OIL	0.7	0.720		45.000		45.000	0.0231	1.441	#	22.500	0.481	22.981	
4013082	D-4	POSO	CLUS.D	62.5	OIL	0.7	0.720	4013079C	45.000	96.0	1.800	0.0231	1.441	#	0.900	0.481	1.381	
4013083	D-5	POSO	CLUS.D	62.5	OIL	0.7	0.720	4013079C	45.000	96.0	1.800	0.0231	1.441	#	0.900	0.481	1.381	
4013084	D-6	POSO	CLUS.D	62.5	OIL	0.7	0.720	4013079C	45.000	96.0	1.800	0.0231	1.441	#	0.900	0.481	1.381	
4013028	D-7	NO.POSO	SHAPIRO	62.5	OIL	0.7	0.720		45.000		45.000	0.0464	2.901	#	22.500	0.969	23.469	
4013026	NPU-1	NO.POSO	SHAPIRO	62.5	OIL	0.7	0.720	4013026D	45.000	96.0	1.800	0.0464	2.901	#	0.900	0.969	1.869	
4013027	NPU-2	NO.POSO	SHAPIRO	62.5	OIL	0.7	0.720	4013026D	45.000	96.0	1.800	0.0464	2.901	#	0.900	0.969	1.869	
4013039	NPU-4	NO POSO	SHAPIRO	62.5	OIL	0.7	0.720	4013026D	45.000	96.0	1.800	0.0464	2.901	#	0.900	0.969	1.869	
4013086	NPU-5	NO POSO	SHAPIRO	62.5	OIL	0.7	0.720	4013026D	45.000	96.0	1.800	0.0464	2.901	#	0.900	0.969	1.869	
				2667.2							460.207		77.271	#	230.101	25.804	255.905	0.095

VI. Emission Calculations

A. Increase in Permitted Emissions

Rule 220.1 subsection V.D.3.b. specifies for a modified emissions unit the increase in permitted emissions (IPE) is:

IPE = PE(for modified emissions unit) - HAPE(modified emissions unit prior to modification)

Subsection V.E.3. specifies that the potential to emit for modifications that are the installation of a more efficient process or material is:

PE(after modification) = PEPM(1-CE)

The definition of HAPE in subsection V.B. specifies it is:

HAPE = PEPM(1-CE)

Thus for this modification the IPE is zero i.e.

IPE = PEPM(1-CE) - PEPM(1-CE) = 0

B. Actual Emission Reductions

Rule 220.1 subsection V.E.3. specifies that the Actual Emissions Reduction (AER) where the reduction is due to the installation of control equipment or due implementation of more efficient process or material is:

AER = HAE(CE)

HAE = Historic Actual Emissions
CE = Control Efficiency

HAE for each generator for each quarter is calculated by the actual oil burned times the representative source test emission factor for oil firing. No calculation of HAE for gas firing is preformed because no controls that reduce emissions while gas firing are proposed and therefore the CE and reduction are zero.

The CE for the conversion from oil to gas firing can be represented by:

$$\frac{\text{oil fired EF - gas fried EF}}{\text{oil fired EF}}$$

To insure all creditable reductions are real an actual representative oil fired emission factor must be used not the permitted factor.

Calculation for each steam generator are shown on pages 16-26.

Creditable reductions are summarized on pages 27-31.

VI. Emission Calculations Cont.

C. Community Bank Adjustment

Rule 220.1 subsection V.E. requires a 10% adjustment for the community bank of actual emission reductions for the community bank. Because this reduction occurred after 8/22/89 by district policy the adjustment is made at the time the reduction is quantified. Community bank adjustments are summarized on pages 31-32.

D. Emission Factors for Oil Firing

1. Steam Generators 4013094 & '096

NO2

NO2 emission factor is based on source test conducted 2/21/90 see page 46.

PM10, SO4 & SO2

The PM10, SO4 and SO2 emission factors are based on a series of test on generators in the same field, fired on oil with the same sulfur content and with the same control equipment. The Tests are shown on pages 35-37 and summarized below:

	Emission Factor lbm/MMbtu		
Date	PM10	SO4	SO2
4/30/82	0.0465	0.0225	0.0305
12/15/82	0.0535	0.0312	0.0305
10/7/86	0.0280	0.0162	0.0391
5/16/85	0.0288	0.0210	0.0160
Average	0.0392	0.0227	0.0285
SLC Limit	0.0530	0.0200	0.0340

Because these tests show an emission factor higher than the SLC limit for SO4 the factor used to quantify credits will be limited to the SLC factor.

CO

The CO emission factor of 0.012 lbm/MMbtu is based on a test of generators in the same field, fired on oil with the same sulfur content and with the same control equipment. The Test is shown on page 36. This emission factor is below the current SLC limit.

VI. Emission Calculations Cont.

2. Steam Generators 4013001-'003 & '072

Emission factors from similar sized uncontrolled oil fired-steam generators (operated by Mobil Oil) are used to establish emission factors for these units. To account for fuel sulfur content the tested emission factors for PM10, SO4 and SO2 are adjusted by the ratio of the actual sulfur content to the sulfur content of the tested generators. The tests are shown on pages 38-40 and summarized below:

	Emission Factor lbm/MMBtu						Fuel
Permit	PM10	SO4	SO2	NO2	HC	CO	Sulfur
4011013	0.1675	0.0447	1.8557	0.3888	-	0.0068	1.63
4011014	0.0937	0.0300	1.7531	0.3823	-	0.0019	1.61
4011066	0.0907	0.0424	1.7434	0.3500	-	0.0038	1.61
Average	0.1173	0.0390	1.7841	0.3737	-	0.0042	1.62
Sulfur Adj.	0.0796	0.0265	1.2100	-	-	-	
SLC EF	0.0500	0.0200	1.1300	0.3800		0.025	001,002
SLC EF	0.0500	0.0600	1.1300	0.3800		0.030	072,003

For PM10 and SO4 the source test emission factor exceeds the SLC emission factor the factor used to quantify credits will be limited to the SLC factor.

3. Steam Generators 4013026,'028,'032,'081,'085

NO2

NO2 emission factor is based on source tests see pages 48-56

PM10, SO4 & SO2 Steam generator'026

The PM10, SO4 and SO2 emission factors are based on a series of test on generators in the same field, fired on oil with the same sulfur content and with the same control equipment. The Tests are shown on pages 41-45 and summarized below:

	Emission Factor lbm/MMbtu		
Date	SO2	PM10	SO4
9/30/86	0.0205	0.0249	0.0143
6/14/85	0.0238	0.1050	0.0516
5/3/84	0.0320	0.0395	0.0243
8/25/83	0.0232	0.0454	0.0273
Average	0.0249	0.0537	0.0294
SLC Limit	0.0290	0.0500	0.0200

VI. Emission Calculations Cont.

Because these tests show an emission factor higher than the SLC limit for PM10 & SO4 the factor used to quantify credits will be limited to the SLC factor.

PM10, SO4, SO2 Steam Generators '028, 032, '081 & '085

These generators are unscrubbed. Emission factors for PM10, SO4 & SO2 can be calculated based on the tests for shown above for unscrubbed generators 4013001-'003 & '072 corrected for sulfur content of 0.7 wt%.

	Emission Factor lbm/MMBtu PM10	SO4	SO2	Fuel Sulfur
Average	0.1173	0.0390	1.7841	1.62
Sulfur Adj.	0.051	0.0169	0.771	0.7
SLC limit	0.09	0.020	0.720	

CO

The CO emission factor of 0.012 lbm/MMbtu is based on a test of a similar generators fired on oil with the similar sulfur content and with the same control equipment. The Test is shown on page 36. This emission factor is below the current SLC limit.

E. Post Project Emission Factors and Pounds/Day for SLC

The applicant has proposed emission factors the steam generators equal to their current gas fired emission factors in the SLC plan. Steam generators 4013026,'094 & '096 are currently permitted to burn gas with a high sulfur content (TEOR casing gas) and therefore have higher emission factors for PM10, SO2 and SO4.

Each of these generators has is currently included in the SLC plan with throttle and use factors of 80% (overall capacity factor of .64). The emissions factors times the rating times the throttle and use factors result in pounds/day for the SLC.

$$\text{pounds/day} = \text{rating}(24)(.8)(.8)(EF)$$

Emission factors and resulting pounds to be included in the post project SLC plan are shown on pages 65-72.

To insure the reductions are real and permanent i.e. provided by these emissions units annual limits on gas burned to reflect the 80/80 capacity factor will be included on each steam generator permit as a Rule 230.1 condition.

Annual compliance testing consistent with policy E1801 will be required to verify that the units continue to comply with these emission factors.

IV Actual Emission Reduction Calculations

PTO 04012001 25.2 MMbtu/hr steam generator unscrubbed

Rule 220.1 Sec V E. 3.
Calculations for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
Q1 bbl/2qtrs	2488	2488	2488	2488	2488	2488
Q2 bbl/2qtrs	5180	5180	5180	5180	5180	5180
Q3 bbl/2qtrs	2246	2246	2246	2246	2246	2246
Q4 bbl/2qtrs	1785	1785	1785	1785	1785	1785
MMBtu/bb	6.23500	6.23500	6.23500	6.23500	6.23500	6.23500
ST EF, lbs/MMBtu	0.05000	1.13000	0.02000	0.37370	0.00000	0.00420
prop EF, lbs/MMBtu	0.01000	0.00300	0.00100	0.13000	0.00000	0.00100
CE	0.00000	0.99735	0.95000	0.65213	ERR	0.76190
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	3.44	96.01	1.63	20.03	ERR	0.27
Q1 .9*AER	3.09	87.13	1.47	18.04	ERR	0.25
Q1 CB allow	0.34	8.88	0.16	2.00	ERR	0.03
Q2 AER	7.87	199.09	3.36	43.05	ERR	0.57
Q2 .9*AER	6.36	179.18	3.02	38.75	ERR	0.51
Q2 CB allow	0.71	19.91	0.34	4.31	ERR	0.06
Q3 AER	3.84	85.77	1.45	18.55	ERR	0.24
Q3 .9*AER	2.74	77.20	1.30	16.69	ERR	0.22
Q3 CB allow	0.38	8.58	0.14	1.85	ERR	0.02
Q4 AER	2.42	60.17	1.15	14.74	ERR	0.19
Q4 .9*AER	2.18	61.35	1.03	13.27	ERR	0.17
Q4 CB allow	0.24	6.02	0.11	1.47	ERR	0.02

IV Actual Emission Reduction Calculations

PTO 04012002 23 MMBtu/hr steam generator enscrubbed

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
01 bbl/2qtrs	9600	2400	2400	2400	2400	2400
02 bbl/2qtrs	8455	5100	5100	5100	5100	5100
03 bbl/2qtrs	2526	2246	2246	2246	2246	2246
04 bbl/2qtrs	3455	1785	1785	1785	1785	1785
MMBtu/bb	0.23500	0.23500	0.23500	0.23500	0.23500	0.23500
ST EF, lbs/MMBtu	0.05000	1.13000	0.02900	0.37370	0.00000	0.00420
prop EF, lbs/MMBtu	0.01000	0.00300	0.00100	0.13000	0.00000	0.00100
CE	0.80000	0.99735	0.65000	0.65213	ERR	0.76190
01 days/2qtr	180	180	180	180	180	180
02 days/2qtr	182	182	182	182	182	182
03 days/2qtr	184	184	184	184	184	184
04 days/2qtr	184	184	184	184	184	184
01 AER	13.38	96.01	1.63	20.03	ERR	0.27
01 .9*AER	11.87	87.13	1.47	18.04	ERR	0.25
01 CB allow	1.33	9.60	0.16	2.00	ERR	0.03
02 AER	11.73	190.09	3.38	43.05	ERR	0.57
02 .9*AER	10.56	179.18	3.02	38.75	ERR	0.51
02 CB allow	1.17	19.01	0.34	4.31	ERR	0.06
03 AER	3.42	85.77	1.45	18.55	ERR	0.24
03 .9*AER	3.08	77.20	1.30	16.69	ERR	0.22
03 CB allow	0.34	8.58	0.14	1.85	ERR	0.02
04 AER	4.60	68.17	1.15	14.74	ERR	0.19
04 .9*AER	4.21	61.35	1.03	13.27	ERR	0.17
04 CB allow	0.47	6.82	0.11	1.47	ERR	0.02

IV Actual Emission Reduction Calculations

PTO 04012001 23 MMBtu/hr steam generator unscrubbed

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
01 bbl/2qtrs	8871	8871	8871	8871	8871	8871
02 bbl/2qtrs	9488	9488	9488	9488	9488	9488
03 bbl/2qtrs	4504	4504	4504	4504	4504	4504
04 bbl/2qtrs	3835	3835	3835	3835	3835	3835
MMBtu/bb	0.23500	0.23500	0.23500	0.23500	0.23500	0.23500
ST EF, lbs/MMBtu	0.05000	1.10000	0.02650	0.37370	0.00000	0.00420
prop EF, lbs/MMBtu	0.01000	0.00380	0.00180	0.13000	0.00000	0.00100
CE	0.80000	0.99735	0.96226	0.65213	ERR	0.76190
01 days/2qtr	180	180	180	180	180	180
02 days/2qtr	182	182	182	182	182	182
03 days/2qtr	184	184	184	184	184	184
04 days/2qtr	184	184	184	184	184	184
01 AER	11.10	315.00	7.13	68.13	ERR	0.09
01 .9*AER	10.06	283.57	6.42	61.32	ERR	0.01
01 CB allow	1.12	31.51	0.71	6.81	ERR	0.09
02 AER	13.02	368.06	8.30	79.35	ERR	1.04
02 .9*AER	11.72	330.26	7.47	71.42	ERR	0.94
02 CB allow	1.30	36.70	0.83	7.94	ERR	0.10
03 AER	6.10	172.00	3.89	37.10	ERR	0.49
03 .9*AER	5.49	154.80	3.50	33.47	ERR	0.44
03 CB allow	0.61	17.20	0.39	3.72	ERR	0.05
04 AER	5.20	146.48	3.31	31.67	ERR	0.42
04 .9*AER	4.68	131.81	2.98	28.50	ERR	0.37
04 CB allow	0.52	14.65	0.33	3.17	ERR	0.04

/AER_3.WK1

IV Actual Emission Reduction Calculations

PTO 04012020 62.5 MMBtu/hr steam generator with sulfur scrubber

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
Q1 bbl/2qtrs	31815	31815	31815	31815	31815	31815
Q2 bbl/2qtrs	34735	34735	34735	34735	34735	34735
Q3 bbl/2qtrs	34591	34591	34591	34591	34591	34591
Q4 bbl/2qtrs	22577	22577	22577	22577	22577	22577
MMBtu/bbl	0.23500	0.23500	0.23500	0.23500	0.23500	0.23500
ST EF, lbs/MMBtu	0.05000	0.02400	0.02000	0.17000	0.00000	0.01200
prop EF, lbs/MMBtu	0.05000	0.02500	0.02000	0.12000	0.00000	0.00100
CE	0.00000	0.00020	0.00000	0.32941	ERR	0.91667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	0.00	0.00	0.00	65.02	ERR	12.12
Q1 .9*AER	0.00	0.00	0.00	58.52	ERR	10.91
Q1 CB allow	0.00	0.00	0.00	6.50	ERR	1.21
Q2 AER	0.00	0.00	0.00	70.99	ERR	13.23
Q2 .9*AER	0.00	0.00	0.00	63.89	ERR	11.91
Q2 CB allow	0.00	0.00	0.00	7.10	ERR	1.32
Q3 AER	0.00	0.00	0.00	69.16	ERR	12.89
Q3 .9*AER	0.00	0.00	0.00	62.24	ERR	11.60
Q3 CB allow	0.00	0.00	0.00	6.92	ERR	1.29
Q4 AER	0.00	0.00	0.00	45.14	ERR	8.42
Q4 .9*AER	0.00	0.00	0.00	40.62	ERR	7.57
Q4 CB allow	0.00	0.00	0.00	4.51	ERR	0.84

IV Actual Emission Reduction Calculations

PTO 4013028 62.5 MMbtu/hr steam generator unscrubbed

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NOx	VOC	CO
Q1 bbl/2qtrs	31072	31072	31072	31072	31072	31072
Q2 bbl/2qtrs	21724	21724	21724	21724	21724	21724
Q3 bbl/2qtrs	7063	7063	7063	7063	7063	7063
Q4 bbl/2qtrs	13024	13024	13024	13024	13024	13024
MMBtu/bbl	6.17600	6.17600	6.17600	6.17600	6.17600	6.17600
ST EF. lbm/MMBtu	0.05100	0.72000	0.01690	0.15430	0.00000	0.01200
prop EF. lbm/MMBtu	0.01000	0.00300	0.00100	0.12000	0.00000	0.00100
CE	0.80392	0.99583	0.94083	0.22229	ERR	0.91667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	43.71	764.40	16.95	36.57	ERR	11.73
Q1 .9*AER	39.34	687.96	15.26	32.91	ERR	10.55
Q1 CB allow	4.37	76.44	1.70	3.66	ERR	1.17
Q2 AER	30.56	534.43	11.85	25.57	ERR	8.20
Q2 .9*AER	27.50	480.99	10.67	23.01	ERR	7.38
Q2 CB allow	3.06	53.44	1.19	2.56	ERR	0.82
Q3 AER	9.72	169.98	3.77	8.13	ERR	2.61
Q3 .9*AER	8.75	152.98	3.39	7.32	ERR	2.35
Q3 CB allow	0.97	17.00	0.38	0.81	ERR	0.26
Q4 AER	17.92	313.44	6.95	14.99	ERR	4.81
Q4 .9*AER	16.13	282.10	6.26	13.49	ERR	4.33
Q4 CB allow	1.79	31.34	0.70	1.50	ERR	0.48

IV Actual Emission Reduction Calculations

PTO 4013032 62.5 MMbtu/hr steam generator wascrubber

Rule 220.1 Sec V B. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NOx	VOC	CO
Q1 bbl/2qtrs	31020	31020	31020	31020	31020	31020
Q2 bbl/2qtrs	21879	21879	21879	21879	21879	21879
Q3 bbl/2qtrs	7484	7484	7484	7484	7484	7484
Q4 bbl/2qtrs	11252	11252	11252	11252	11252	11252
MMBtu/bbl	6.32000	6.32000	6.32000	6.32000	6.32000	6.32000
ST EF. lbs/MMBtu	0.05100	0.72000	0.01690	0.17000	0.00000	0.01200
prop EF, lbs/MMBtu	0.01000	0.00300	0.00100	0.12000	0.00000	0.00100
CE	0.80392	0.99583	0.94083	0.29412	ERR	0.91667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	44.66	780.92	17.32	58.46	ERR	11.98
Q1 .9*AER	40.19	702.83	15.59	49.01	ERR	10.78
Q1 CB allow	4.47	78.09	1.73	5.45	ERR	1.20
Q2 AER	31.50	550.80	12.21	38.41	ERR	8.45
Q2 .9*AER	28.35	495.72	10.99	34.57	ERR	7.61
Q2 CB allow	3.15	55.08	1.22	3.84	ERR	0.85
Q3 AER	10.54	184.31	4.09	12.85	ERR	2.83
Q3 .9*AER	9.49	165.88	3.68	11.57	ERR	2.54
Q3 CB allow	1.05	18.43	0.41	1.29	ERR	0.28
Q4 AER	15.85	277.11	6.15	19.32	ERR	4.25
Q4 .9*AER	14.26	249.40	5.53	17.39	ERR	3.83
Q4 CB allow	1.58	27.71	0.61	1.93	ERR	0.43

IV Actual Emission Reduction Calculations

PTO 04012072 22 MMbtu/hr steam generator unscrubbed

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
Q1 bbl/2qtrs	3530	3530	3530	3530	3530	3530
Q2 bbl/2qtrs	3827	3827	3827	3827	3827	3827
Q3 bbl/2qtrs	2092	2092	2092	2092	2092	2092
Q4 bbl/2qtrs	821	821	821	821	821	821
MMBtu/bb	6.23500	6.23500	6.23500	6.23500	6.23500	6.23500
ST EF, lbs/MMBtu	0.05000	1.13000	0.02650	0.37370	0.00000	0.00420
prop EF, lbs/MMBtu	0.01000	0.00300	0.00100	0.13000	0.00000	0.00100
CE	0.80000	0.99735	0.96226	0.65213	ERR	0.76190
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	4.09	137.00	3.12	29.00	ERR	0.29
Q1 .9*AER	4.40	124.02	2.81	26.02	ERR	0.35
Q1 CB allow	0.49	13.78	0.31	2.90	ERR	0.04
Q2 AER	5.30	149.40	3.38	32.31	ERR	0.42
Q2 .9*AER	4.77	134.46	3.04	29.00	ERR	0.38
Q2 CB allow	0.53	14.94	0.34	3.23	ERR	0.04
Q3 AER	2.84	79.09	1.81	17.20	ERR	0.23
Q3 .9*AER	2.55	71.00	1.63	15.55	ERR	0.20
Q3 CB allow	0.28	7.99	0.18	1.73	ERR	0.02
Q4 AER	1.11	31.35	0.71	6.78	ERR	0.09
Q4 .9*AER	1.00	28.22	0.64	6.10	ERR	0.08
Q4 CB allow	0.11	3.14	0.07	0.68	ERR	0.01

IV Actual Emission Reduction Calculations

PTO 401308I 62.5 MMBtu/hr steam generator unscrubbed

Rule 220.1 Sec V B. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NOx	VOC	CO
Q1 bbl/2qtrs	32490	32490	32490	32490	32490	32490
Q2 bbl/2qtrs	19751	19751	19751	19751	19751	19751
Q3 bbl/2qtrs	6719	6719	6719	6719	6719	6719
Q4 bbl/2qtrs	11441	11441	11441	11441	11441	11441
MMBtu/bbl	6.17600	6.17600	6.17600	6.17600	6.17600	6.17600
ST EF, lbm/MMBtu	0.05100	0.72000	0.01690	0.16080	0.00000	0.01200
prop EF, lbm/MMBtu	0.01000	0.00300	0.00100	0.12000	0.00000	0.00100
CE	0.80392	0.99583	0.94083	0.25373	ERR	0.91667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	45.71	799.29	17.72	45.48	ERR	12.25
Q1 .9*AER	41.13	719.36	15.95	40.93	ERR	11.04
Q1 CB allow	4.57	79.93	1.77	4.55	ERR	1.23
Q2 AER	27.78	485.90	10.78	27.65	ERR	7.45
Q2 .9*AER	25.01	437.31	9.70	24.88	ERR	6.71
Q2 CB allow	2.78	48.59	1.08	2.76	ERR	0.75
Q3 AER	9.25	161.70	3.59	9.20	ERR	2.48
Q3 .9*AER	8.32	145.53	3.23	8.28	ERR	2.23
Q3 CB allow	0.92	16.17	0.36	0.92	ERR	0.25
Q4 AER	15.74	275.34	6.11	15.67	ERR	4.22
Q4 .9*AER	14.17	247.81	5.50	14.10	ERR	3.80
Q4 CB allow	1.57	27.53	0.61	1.57	ERR	0.42

IV Actual Emission Reduction Calculations

PTO 4013085 62.5 MMBtu/hr steam generator unscrubbed

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NOx	VOC	CO
Q1 bbl/2qtrs	31665	31665	31665	31665	31665	31665
Q2 bbl/2qtrs	22014	22014	22014	22014	22014	22014
Q3 bbl/2qtrs	7654	7654	7654	7654	7654	7654
Q4 bbl/2qtrs	12698	12698	12698	12698	12698	12698
MMBtu/bbl	6.32000	6.32000	6.32000	6.32000	6.32000	6.32000
ST EF, lbs/MMBtu	0.05100	0.72000	0.01690	0.17300	0.00000	0.01200
prop EF, lbs/MMBtu	0.01000	0.00380	0.00100	0.12000	0.00000	0.00100
CE	0.80392	0.99583	0.94083	0.30636	ERR	0.91667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	45.58	797.16	17.68	58.93	ERR	12.23
Q1 .9*AER	41.03	717.44	15.91	53.03	ERR	11.01
Q1 CB allow	4.56	79.72	1.77	5.89	ERR	1.22
Q2 AER	31.69	554.28	12.29	40.97	ERR	8.50
Q2 .9*AER	28.52	498.78	11.06	36.87	ERR	7.65
Q2 CB allow	3.17	55.42	1.23	4.10	ERR	0.85
Q3 AER	10.78	188.58	4.18	13.93	ERR	2.89
Q3 .9*AER	9.70	169.65	3.76	12.54	ERR	2.60
Q3 CB allow	1.08	18.85	0.42	1.39	ERR	0.29
Q4 AER	17.88	312.72	6.93	23.12	ERR	4.80
Q4 .9*AER	16.09	281.45	6.24	20.80	ERR	4.32
Q4 CB allow	1.79	31.27	0.69	2.31	ERR	0.48

IV Actual Emission Reduction Calculations

PTO 94012094 62.5 MMBtu/hr steam generator with sulfer scrubber

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE= (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
Q1 bbl/2qtrs	31865	31865	31865	31865	31865	31865
Q2 bbl/2qtrs	5070	5070	5070	5070	5070	5070
Q3 bbl/2qtrs	0	0	0	0	0	0
Q4 bbl/2qtrs	10574	10574	10574	10574	10574	10574
MMBtu/bb	0.19900	0.19900	0.19900	0.19900	0.19900	0.19900
St EF, lbs/MMBtu	0.03920	0.02000	0.02050	0.10410	0.00800	0.01200
prop EF, lbs/MMBtu	0.05300	0.02000	0.03400	0.09000	0.00900	0.00100
CE	0.00000	0.00000	0.00000	0.45155	ERR	0.01667
Q1 days/2qtr	180	180	180	180	180	180
Q2 days/2qtr	182	182	182	182	182	182
Q3 days/2qtr	184	184	184	184	184	184
Q4 days/2qtr	184	184	184	184	184	184
Q1 AER	0.00	0.00	0.00	81.32	ERR	12.07
Q1 .8*AER	0.00	0.00	0.00	73.19	ERR	10.86
Q1 CO allow	0.00	0.00	0.00	8.13	ERR	1.21
Q2 AER	0.00	0.00	0.00	12.84	ERR	1.92
Q2 .8*AER	0.00	0.00	0.00	11.54	ERR	1.73
Q2 CO allow	0.00	0.00	0.00	1.29	ERR	0.19
Q3 AER	0.00	0.00	0.00	0.00	ERR	0.00
Q3 .8*AER	0.00	0.00	0.00	0.00	ERR	0.00
Q3 CO allow	0.00	0.00	0.00	0.00	ERR	0.00
Q4 AER	0.00	0.00	0.00	26.40	ERR	3.92
Q4 .8*AER	0.00	0.00	0.00	23.76	ERR	3.53
Q4 CO allow	0.00	0.00	0.00	2.64	ERR	0.39

/AER_3.WK1

IV Actual Emission Reduction Calculations

PTO 04012000 12.5 MMBtu/hr steam generator with sulfur scrubber

Rule 220.1 Sec V E. 3.
Calculation for AER for the addition of control equipment or change to more efficient process

CE: (source test EF - proposed EF)/source test EF

	PM10	SO2	SO4	NO2	VOC	CO
Q1 bbl/Qtrs	31899	31899	31899	31899	31899	31899
Q2 bbl/Qtrs	5554	5554	5554	5554	5554	5554
Q3 bbl/Qtrs	0	0	0	0	0	0
Q4 bbl/Qtrs	10481	10481	10481	10481	10481	10481
MMBtu/bb	0.19900	0.19900	0.19900	0.19900	0.19900	0.19900
ST EF, lbs/MMBtu	0.03920	0.02900	0.02850	0.16410	0.00000	0.01200
prop EF, lbs/MMBtu	0.05300	0.02850	0.03403	0.09000	0.00000	0.00100
CE	0.00000	0.00000	0.00000	0.45155	ERR	0.91667
Q1 days/Qtr	180	180	180	180	180	180
Q2 days/Qtr	182	182	182	182	182	182
Q3 days/Qtr	184	184	184	184	184	184
Q4 days/Qtr	184	184	184	184	184	184
Q1 AER	0.00	0.00	0.00	81.48	ERR	12.00
Q1 .9*AER	0.00	0.00	0.00	73.26	ERR	10.80
Q1 CE allow	0.00	0.00	0.00	0.14	ERR	1.21
Q2 AER	0.00	0.00	0.00	14.17	ERR	2.10
Q2 .9*AER	0.00	0.00	0.00	12.76	ERR	1.89
Q2 CE allow	0.00	0.00	0.00	1.42	ERR	0.21
Q3 AER	0.00	0.00	0.00	0.00	ERR	0.00
Q3 .9*AER	0.00	0.00	0.00	0.00	ERR	0.00
Q3 CE allow	0.00	0.00	0.00	0.00	ERR	0.00
Q4 AER	0.00	0.00	0.00	26.17	ERR	3.88
Q4 .9*AER	0.00	0.00	0.00	23.55	ERR	3.50
Q4 CE allow	0.00	0.00	0.00	2.62	ERR	0.39

Summary of Creditable Actual
Emissions Reductions
First Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	73.19	10.86
4012096	0.00	0.00	0.00	73.26	10.88
** Subtotal **	0.00	0.00	0.00	146.5	21.74
** 910704					
4012001	3.09	1.47	87.13	18.84	0.25
** Subtotal **	3.09	1.47	87.13	18.84	0.25
** 910705					
4012026	0.00	0.00	0.00	58.52	10.91
** Subtotal **	0.00	0.00	0.00	58.52	10.91
** 910706					
4012003	10.06	6.42	283.57	61.32	0.81
** Subtotal **	10.06	6.42	283.57	61.32	0.81
** 910707					
4012072	4.40	2.81	124.02	26.82	0.35
4012002	11.97	1.47	87.13	18.84	0.25
** Subtotal **	16.37	4.28	211.15	45.66	0.60
** 910708					
4012032	40.19	15.59	702.83	49.01	10.78
4012085	41.03	15.91	717.44	53.03	11.01
** Subtotal **	81.22	31.50	1420.3	102.0	21.79
** 910709					
4012028	39.34	15.26	687.96	32.91	10.55
4012081	41.13	15.95	719.36	40.93	11.04
** Subtotal **	80.47	31.21	1407.3	73.84	21.59
*** Total ***	191.2	74.88	3409.4	506.7	77.69

Summary of Creditable Actual
Emissions Reductions
Second Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	11.64	1.73
4012096	0.00	0.00	0.00	12.76	1.89
** Subtotal **	0.00	0.00	0.00	24.40	3.62
** 910704					
4012001	6.36	3.02	179.18	38.75	0.51
** Subtotal **	6.36	3.02	179.18	38.75	0.51
** 910705					
4012026	0.00	0.00	0.00	63.89	11.91
** Subtotal **	0.00	0.00	0.00	63.89	11.91
** 910706					
4012003	11.72	7.47	330.26	71.42	0.94
** Subtotal **	11.72	7.47	330.26	71.42	0.94
** 910707					
4012072	4.77	3.04	134.46	29.08	0.38
4012002	10.56	3.02	179.18	38.75	0.51
** Subtotal **	15.33	6.06	313.64	67.83	0.89
** 910708					
4012032	28.35	10.99	495.72	34.57	7.61
4012085	28.52	11.06	498.78	36.87	7.65
** Subtotal **	56.87	22.05	994.50	71.44	15.26
** 910709					
4012028	27.50	10.67	480.99	23.01	7.38
4012081	25.01	9.70	437.31	24.88	6.71
** Subtotal **	52.51	20.37	918.30	47.89	14.09
*** Total ***	142.8	58.97	2735.9	385.6	47.22

Summary of Creditable Actual
Emissions Reductions
Third Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	0.00	0.00
4012096	0.00	0.00	0.00	0.00	0.00
** Subtotal **					
8024190	0.00	0.00	0.00	0.00	0.00
** 910704					
4012001	2.74	1.30	77.20	16.69	0.22
** Subtotal **					
4012001	2.74	1.30	77.20	16.69	0.22
** 910705					
4012026	0.00	0.00	0.00	62.24	11.60
** Subtotal **					
4012026	0.00	0.00	0.00	62.24	11.60
** 910706					
4012003	5.49	3.50	154.80	33.47	0.44
** Subtotal **					
4012003	5.49	3.50	154.80	33.47	0.44
** 910707					
4012072	2.55	1.63	71.90	15.55	0.20
4012002	3.08	1.30	77.20	16.69	0.22
** Subtotal **					
8024074	5.63	2.93	149.10	32.24	0.42
** 910708					
4012032	9.49	3.68	165.88	11.57	2.54
4012085	9.70	3.76	169.65	12.54	2.60
** Subtotal **					
8024117	19.19	7.44	335.53	24.11	5.14
** 910709					
4012028	8.75	3.39	152.98	7.32	2.35
4012081	8.32	3.23	145.53	8.28	2.23
** Subtotal **					
8024109	17.07	6.62	298.51	15.60	4.58
*** Total ***					
.4E+08	50.12	21.79	1015.1	184.3	22.40

Summary of Creditable Actual Emission Reductions Fourth Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	23.76	2.64
4012096	0.00	0.00	0.00	23.55	3.50
** Subtotal **					
8024190	0.00	0.00	0.00	47.31	6.14
** 910704					
4012001	2.18	1.03	61.35	13.27	0.17
** Subtotal **					
4012001	2.18	1.03	61.35	13.27	0.17
** 910705					
4012026	0.00	0.00	0.00	40.62	7.57
** Subtotal **					
4012026	0.00	0.00	0.00	40.62	7.57
** 910706					
4012003	4.68	2.98	131.81	28.50	0.37
** Subtotal **					
4012003	4.68	2.98	131.81	28.50	0.37
** 910707					
4012072	1.00	0.64	28.22	6.10	0.08
4012002	4.21	1.03	61.35	13.27	0.17
** Subtotal **					
8024074	5.21	1.67	89.57	19.37	0.25
** 910708					
4012032	14.26	5.53	249.40	17.39	3.83
4012085	16.09	6.24	281.45	20.80	4.32
** Subtotal **					
8024117	30.35	11.77	530.85	38.19	8.15
** 910709					
4012028	16.13	6.26	282.10	13.49	4.33
4012081	14.17	5.50	247.81	14.10	3.80
** Subtotal **					
8024109	30.30	11.76	529.91	27.59	8.13
*** Total ***					
.4E+08	72.72	29.21	1343.5	214.9	30.78

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Community Bank

Summary of Creditable Actual
Emissions Reductions
First Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	8.13	1.21
4012096	0.00	0.00	0.00	8.14	1.21
** Subtotal **	0.00	0.00	0.00	16.27	2.42
** 910704					
4012001	0.34	0.16	9.68	2.09	0.03
** Subtotal **	0.34	0.16	9.68	2.09	0.03
** 910705					
4012026	0.00	0.00	0.00	6.50	1.21
** Subtotal **	0.00	0.00	0.00	6.50	1.21
** 910706					
4012003	1.12	0.71	31.51	6.81	0.09
** Subtotal **	1.12	0.71	31.51	6.81	0.09
** 910707					
4012072	0.49	0.31	13.78	2.98	0.04
4012002	1.33	0.16	9.68	2.09	0.03
** Subtotal **	1.82	0.47	23.46	5.07	0.07
** 910708					
4012032	4.47	1.73	78.09	5.45	1.20
4012085	4.56	1.77	79.72	5.89	1.22
** Subtotal **	9.03	3.50	157.81	11.34	2.42
** 910709					
4012028	4.37	1.70	76.44	3.66	1.17
4013081	4.57	1.77	79.93	4.55	1.23
** Subtotal **	8.94	3.47	156.37	8.21	2.40
*** Total ***	21.25	8.31	378.83	56.29	8.64

Community Bank

Summary of Creditable Actual
Emissions Reductions
Second Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	1.29	0.19
4012096	0.00	0.00	0.00	1.42	0.21
** Subtotal **	0.00	0.00	0.00	2.71	0.40
** 910704					
4012001	0.71	0.34	19.91	4.31	0.06
** Subtotal **	0.71	0.34	19.91	4.31	0.06
** 910705					
4012026	0.00	0.00	0.00	7.10	1.32
** Subtotal **	0.00	0.00	0.00	7.10	1.32
** 910706					
4012003	1.30	0.83	36.70	7.94	0.10
** Subtotal **	1.30	0.83	36.70	7.94	0.10
** 910707					
4012072	0.53	0.34	14.94	3.23	0.04
4012002	1.17	0.34	19.91	4.31	0.06
** Subtotal **	1.70	0.68	34.85	7.54	0.10
** 910708					
4012032	3.15	1.22	55.08	3.84	0.85
4012085	3.17	1.23	55.42	4.10	0.85
** Subtotal **	6.32	2.45	110.50	7.94	1.70
** 910709					
4012028	3.06	1.19	53.44	2.56	0.82
4013081	2.78	1.08	48.59	2.76	0.75
** Subtotal **	5.84	2.27	102.03	5.32	1.57
*** Total ***	15.87	6.57	303.99	42.86	5.25

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Community Bank

Summary of Creditable Actual
Emissions Reductions
Third Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	0.00	0.00
4012096	0.00	0.00	0.00	0.00	0.00
** Subtotal **					
8024190	0.00	0.00	0.00	0.00	0.00
** 910704					
4012001	0.30	0.14	8.58	1.85	0.02
** Subtotal **					
4012001	0.30	0.14	8.58	1.85	0.02
** 910705					
4012026	0.00	0.00	0.00	6.92	1.29
** Subtotal **					
4012026	0.00	0.00	0.00	6.92	1.29
** 910706					
4012003	0.61	0.39	17.20	3.72	0.05
** Subtotal **					
4012003	0.61	0.39	17.20	3.72	0.05
** 910707					
4012072	0.28	0.18	7.99	1.73	0.02
4012002	0.34	0.14	5.58	1.85	0.02
** Subtotal **					
8024074	0.62	0.32	13.57	3.58	0.04
** 910708					
4012032	1.05	0.41	18.43	1.29	0.28
4012085	1.08	0.42	18.85	1.39	0.29
** Subtotal **					
8024117	2.13	0.83	37.28	2.68	0.57
** 910709					
4012028	0.97	0.38	17.00	0.81	0.26
4013081	0.92	0.36	16.17	0.92	0.25
** Subtotal **					
8025109	1.89	0.74	33.17	1.73	0.51
*** Total ***					
.4E+08	5.55	2.42	109.80	20.48	2.48

Community Bank

Summary of Creditable Actual
Emission Reductions
Fourth Quarter

Permit	PM10	SO4	SO2	NO2	CO
** 910703					
4012094	0.00	0.00	0.00	2.64	0.39
4012096	0.00	0.00	0.00	2.62	0.39
** Subtotal **					
8024190	0.00	0.00	0.00	5.26	0.78
** 910704					
4012001	0.24	0.11	6.82	1.47	0.02
** Subtotal **					
4012001	0.24	0.11	6.82	1.47	0.02
** 910705					
4012026	0.00	0.00	0.00	4.51	0.84
** Subtotal **					
4012026	0.00	0.00	0.00	4.51	0.84
** 910706					
4012003	0.52	0.33	14.65	3.17	0.04
** Subtotal **					
4012003	0.52	0.33	14.65	3.17	0.04
** 910707					
4012072	0.11	0.07	3.14	0.68	0.01
4012002	0.47	0.11	6.82	1.47	0.02
** Subtotal **					
8024074	0.58	0.18	9.96	2.15	0.03
** 910708					
4012032	1.58	0.61	27.71	1.93	0.43
4012085	1.79	0.69	31.27	2.31	0.48
** Subtotal **					
8024117	3.37	1.30	58.98	4.24	0.91
** 910709					
4012028	1.79	0.70	31.34	1.50	0.48
4013081	1.57	0.61	27.53	1.57	0.42
** Subtotal **					
8025109	3.36	1.31	58.87	3.07	0.90
*** Total ***					
.4E+08	8.07	3.23	149.28	23.87	3.52

Pages 35 - 70 contained in Project 910703
ERC 4013094/101/201/401/601 Only

VII. Conclusions

A. Because these emission reductions can be validated as Actual Emission Reductions they qualify for ERC banking certificates that may be used in accordance with the requirements of Rule 220.1.

B. Because these reductions occurred after 1/1/88 the 10% adjustment for the community bank shall be made at the time the reductions are quantified and shall not be included in the amount of the ERC Banking Certificate.

VIII. Recommendations

After public notice and review issue ERC Banking Certificates in the amounts shown on pages 27-30 totaling the following:

	Pounds/day				
	PM10	SO4	SO2	NO2	CO
1st Qtr	191.20	74.88	3409.40	506.70	77.69
2nd Qtr	142.80	58.97	2735.90	385.60	47.22
3rd Qtr	50.12	21.79	1015.10	184.30	22.40
4th Qtr	72.72	29.21	1343.50	214.90	30.78

Upon issuance of ERC Banking Certificates deposit to the community bank the following amounts

	Pounds/day				
	PM10	SO4	SO2	NO2	CO
1st Qtr	21.25	8.31	378.83	56.29	8.64
2nd Qtr	15.87	6.57	303.99	42.86	5.25
3rd Qtr	5.55	2.42	109.80	20.48	2.48
4th Qtr	8.07	3.23	149.28	23.87	3.52

Name: JE

Date: 1/30/92

Project: 403 9/0703-9/0709

SUMMARY OF PROBLEMS ENCOUNTERED DURING APPLICATION PROCESSING

COMPANY NAME: SWEP West Coast

PROJECT DESCRIPTION: Convert SGs to Gas Fired Only Bank Credits

BRIEF DESCRIPTION OF PROBLEMS ENCOUNTERED:

1. Alternate time period request not applicable
2. Calculations submitted not consistent with R 220.1
3.
4.
5.
6.
7.
8.
9.
10.

FRACTION OF TOTAL PROCESSING TIME SPENT ON CORRECTING THE ABOVE: 30 %

ENGINEERING EVALUATION OF APPLICATIONS FOR AUTHORITY TO CONSTRUCT

BREAKDOWN OF PROCESSING TIME

Company Name: SWEP West Coast

Company Number: 4013 Project Number: 910703-910709

Project Description: Banking Certs for Conversion of SGs to Gas fired Only

Processing Dates, Including Preliminaries: 7/9/91, 8/13/91, 9/30/91 12/6/91 1/25/92 1/24/92 1/25/92 1/26/92 1/27/92 1/30/92 1/31/92

PROCESSING ACTIVITY:	ACTIVITY TIME (HOURS):	INITAL:
Initial Contact: ___ telephone ___ in person	___	___
Project Entry into System 36:	1.0	
Preliminary Review:	3.0	
Organization/Familiarization:	1.5	
Project Description/Schematic/Equipment Listing:	.5	
Listing of Applicable Rules:	.5	
Design Review of Air Pollution Control Equipment:	—	___
Calculation of Expected Emissions Credits	8.0	
Air Quality Impact Assessment Review (Modeling):	—	___
Preparation of Emission Profiles:	—	___
CEQA Review:	—	___
Health Risk Assessment Review:	—	___
Reworking of Application Due to Changes:	___	___
Preparation of Rough Draft ~~A's to C~~ ERC	.5	
Preparation of Written Requests for Information:	1.0	
Telephone and Verbal Requests for Information:	1.0	
General Meetings with Applicant:	.5	
System 36 Data Entry (Including Emissions):	1.0	
_____ :	___	___
TOTAL TIME SPENT ON EVALUATION:	18.5	

18.5 hrs @ $50/hr = $925 fees paid $4530
∴ no fees due

PROJECT EVALUATION STATUS REPORT PROJECT # 4013 910703

DATES SUBMITTED:

PROJECT ENGINEER: Lance Erickson ASSIGNMENT DATE: / /

COMPANY: Shell Western E&P PROJECT: ERCs for Dalfriy to Gas Only

~~A PO C~~ ERC NUMBER(S): 4013094/101/201/301/401/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/92

60 days 2/4/92

EVALUATION STATUS SUMMARY:

12/6/91 Project proposal familiarization completed

1/24/92 Project proposal description complete

1/24/92 Listing of applicable Rules and Regulations completed

N Req Project proposal schematic(s) completed

N Req Design review of emissions control system(s) completed

1/30/92 Calculation of expected air contaminant emissions completed

N Req Preparation of emission profiles completed

1/31/92 Comprehensive listing of conclusions & recommendations completed

1/30/92 Rough draft ~~A to C~~ ERCs completed

1/31/92 Applicant notified of A to C requirements different than proposed

1/31/92 Project evaluation ~~submitted to Manager of Engineering as~~ complete

* _____ Waiting for additional information requested by: ___phone ___letter

* _____ Applicant notified of pending denial on ___/___/___

* _____ Request for 90 day extension received on ___/___/___

PROJECT EVALUATION STATUS REPORT PROJECT # 4013 91070A

DATES SUBMITTED:

PROJECT ENGINEER: Lance Eriksen ASSIGNMENT DATE: 1 1

COMPANY: Shell Western E&P PROJECT: ERCs for Dal firing to gas only

ERC ~~A TO C~~ NUMBER(S): 4013001/101/201/301/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/92

60 days 2/4/92

EVALUATION STATUS SUMMARY:

12/6/91 Project proposal familiarization completed

1/25 Project proposal description complete

" Listing of applicable Rules and Regulations completed

not req Project proposal schematic(s) completed

" Design review of emissions control system(s) completed

1/30 Calculation of expected air contaminant emissions completed

not req Preparation of emission profiles completed

1/30 Comprehensive listing of conclusions & recommendations completed

1/30 Rough draft ~~A to C~~ ERCs completed

1/31 Applicant notified of A to C requirements different than proposed

1/31/92 Project evaluation ~~submitted to Manager of Engineering as~~ complete

- _____ Waiting for additional information requested by: ___phone ___letter
- _____ Applicant notified of pending denial on ___/___/___
- _____ Request for 90 day extension received on ___/___/___

PROJECT EVALUATION STATUS REPORT PROJECT # 4013 910705

DATES SUBMITTED:

PROJECT ENGINEER: Lance Eriksen ASSIGNMENT DATE: 1/1

COMPANY: Shell Western E+P PROJECT: ERCs for Dalhart to Gas Only

~~A TO C~~ ERC NUMBER(S): 4013026/101/201/301/901/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/92
60 days 2/4/92

EVALUATION STATUS SUMMARY:

12/6 Project proposal familiarization completed

1/25 Project proposal description complete

1/25 Listing of applicable Rules and Regulations completed

not req Project proposal schematic(s) completed

" Design review of emissions control system(s) completed

1/30 Calculation of expected air contaminant emissions completed

not req Preparation of emission profiles completed

1/30 Comprehensive listing of conclusions & recommendations completed

" Rough draft ~~A to~~ ERCs C completed

1/31 Applicant notified of A to C requirements different than proposed

" Project evaluation ~~submitted to Manager of Engineering as~~ complete

* _____ Waiting for additional information requested by: ___phone ___letter

* _____ Applicant notified of pending denial on __/__/__

* _____ Request for 90 day extension received on __/__/__

PROJECT EVALUATION STATUS REPORT **PROJECT # 4013 910206**

DATES SUBMITTED: ______

PROJECT ENGINEER: Lance Ericksen **ASSIGNMENT DATE:** __/__/__

COMPANY: Shell Western E&P **PROJECT:** ERCs for Dual firing to Gas Only

ERC ~~A TO C~~ **NUMBER(S):** 4013003/101/201/301/401/601 **RECEIPT DATE:** 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 **180th DAY:** 6/5/92

60 Days 2/4/92

EVALUATION STATUS SUMMARY:

12/6 Project proposal familiarization completed

1/25 Project proposal description complete

1/25 Listing of applicable Rules and Regulations completed

not reqr Project proposal schematic(s) completed

" Design review of emissions control system(s) completed

1/30 Calculation of expected air contaminant emissions completed

not reqr Preparation of emission profiles completed

1/30 Comprehensive listing of conclusions & recommendations completed

1/30 Rough draft ~~A's to C~~ ERCs completed

1/31 Applicant notified of A to C requirements different than proposed

1/31 Project evaluation ~~submitted to Manager of Engineering as~~ complete

* ______ Waiting for additional information requested by: ___phone ___letter

* ______ Applicant notified of pending denial on __/__/__

* ______ Request for 90 day extension received on __/__/__

PROJECT EVALUATION STATUS REPORT PROJECT # 4013 910707

DATES SUBMITTED:

PROJECT ENGINEER: Lance Eriksen ASSIGNMENT DATE: 1/1

COMPANY: Shell Western E&P PROJECT: ERCs for Dalfriy to Gas Only

~~A TO C~~ ERC NUMBER(S): 4013 C02/101/201/301/401/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/92
60 days 2/4/92

EVALUATION STATUS SUMMARY:

12/6 Project proposal familiarization completed

1/25 Project proposal description complete

1/25 Listing of applicable Rules and Regulations completed

~~not req~~ Project proposal schematic(s) completed

" Design review of emissions control system(s) completed

1/30 Calculation of expected air contaminant emissions completed

~~not req~~ Preparation of emission profiles completed

1/30 Comprehensive listing of conclusions & recommendations completed

" Rough draft ~~A's to C~~ ERCs completed

1/31 Applicant notified of A to C requirements different than proposed

" Project evaluation ~~submitted to Manager of Engineering as~~ complete

- _____ Waiting for additional information requested by: ___phone ___letter
- _____ Applicant notified of pending denial on __/__/__
- _____ Request for 90 day extension received on __/__/__

PROJECT EVALUATION STATUS REPORT **PROJECT # 4013 910708**

DATES SUBMITTED: ______

PROJECT ENGINEER: Lance Ericksen ASSIGNMENT DATE: 7/3/91

COMPANY: Shell Western E&P PROJECT: ERCs for Dual firing to Gas Only

ERC ~~A to C~~ NUMBER(S): 4013037/101/201/301/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/91

60th day 2/4/91

EVALUATION STATUS SUMMARY:

12/6/91 Project proposal familiarization completed

1/25/92 Project proposal description complete

" Listing of applicable Rules and Regulations completed

not req. Project proposal schematic(s) completed

" Design review of emissions control system(s) completed

1/30/92 Calculation of expected air contaminant emissions completed

not req. Preparation of emission profiles completed

1/30 Comprehensive listing of conclusions & recommendations completed

1/30 Rough draft ~~A's to C~~ ERCs completed

1/31 Applicant notified of A to C requirements different than proposed

1/31 Project evaluation ~~submitted to Manager of Engineering as~~ complete

- ______ Waiting for additional information requested by: ____phone ____letter
- ______ Applicant notified of pending denial on ___/___/___
- ______ Request for 90 day extension received on ___/___/___

Proj 403 910703-910709

FINAL CHECKLIST

✓ Engineering analysis includes all items described in guidelines, all items appear in correct order, and all parts of analysis read logically and are legible.

Not req Rule 210.1 Certificate of compliance, if required, has been received and is of proper content and form.

✓ Package is divided into sections (each one in a folder) as described in guidelines and each folder has a correctly prepared label.

✓ Rough draft ~~A's to C~~ EPCs have been prepared in accordance with guidelines and in correct format with correct punctuation. Drafts read logically and are legible. Each Design and Operational condition is followed by number of rule requiring the condition or providing basis for the condition.

✓ Applicant has been notified by telephone of all conditions appearing in A's to C but not proposed in application.

Not req Emissions summary sheets (one for whole project and one System 36 printout for each A to C) have been prepared including net emissions change for whole stationary source. NSPS status has been marked.

not req Emission profiles have been prepared according to guidelines, a maximum daily emission rate has been set, and compliance (on a "moving" yearly average) has been required.

not req NSPS/NESHAPS, BACT/LAER, and/or NSR report has been prepared, with three copies of each.

not req KCAPCD Grant Objectives report has been prepared for approval of source emitting over 82 lbm/day PM_{10} and for sources "netting out" of NSR requirements for any criteria air contaminant.

not req Source test requirements summary has been prepared (don't specify emission limits, just mark "inlet", "outlet", "units", etc.), and one copy has been made.

Not req Permit fee billing edit has been prepared which includes all A's to C involved in project, even if there is no fee due for one or more A's to C.

✓ Problems encountered summary sheet has been prepared which includes all items (understandably and clearly described) which resulted in unnecessary expenditure of time; unnecessary meaning that the time would not have been spent if the application had been correctly submitted, the data was all correct, no changes were made "in midstream", etc.

✓ Engineering evaluation time sheet has been prepared which incudes all time spent in processing the applications. This includes time spent discussing the application with others, time spent revising, etc.

Signed: Jane Engle, Project Evaluation Engineer

Initialed: Not Req, Reviewing Engineer

PROJECT EVALUATION STATUS REPORT PROJECT # 4013 910709

DATES SUBMITTED:

PROJECT ENGINEER: Lance Eriksen ASSIGNMENT DATE: / /

COMPANY: Shell Western E&P PROJECT: ERCs for Dual firing to Gas Only

~~A/P/C~~ ERC NUMBER(S): 4013028/101/201/301/601 RECEIPT DATE: 7/9/91

DATE PACKAGE DEEMED COMPLETE: 12/6/91 180th DAY: 6/5/91
60th day 2/4/91

EVALUATION STATUS SUMMARY:

12/6/91 Project proposal familiarization completed

1/25/92 Project proposal description complete

4 Listing of applicable Rules and Regulations completed

not req Project proposal schematic(s) completed

11 Design review of emissions control system(s) completed

1/31/92 Calculation of expected air contaminant emissions completed

not req Preparation of emission profiles completed

1/30/92 Comprehensive listing of conclusions & recommendations completed

1/30/92 Rough draft ~~A's to C~~ ERCs completed

1/31/92 Applicant notified of A to C requirements different than proposed

11 Project evaluation ~~submitted to Manager of Engineering as~~ complete

* _____ Waiting for additional information requested by: ___phone ___letter

* _____ Applicant notified of pending denial on ___/___/___

* _____ Request for 90 day extension received on ___/___/___

NEW FILE REQUEST FORM

Company Name: Shell Western E+P, Inc.

~~Permit~~ ERC Number: 4013003/101/201/301/401/601 **Project Number:** 910706

Description: Conversion to Gas fired only of One Oilfield Steam Generator.

Location: Central Heavy Oilfields **Processors Name:** JE

File Type (check one): ~~ATC~~ ERC ___ PTO ___ **Issue Date:** 3/30/92

Support Documents Included With Request Form? ___Yes ✓ No

Return File to Permit Processor? ✓ Yes ___ No please file

Folder Size: Pocket___ Regular ✓ SEC 6 T 29S R 28E