Santa Barbara County
Air Pollution Control District

PRELIMINARY
DECISION OF ISSUANCE NO. 109

I. GENERAL INFORMATION

a. ERC Owner: The Point Arguello Pipeline Company (PAPCO). PAPCO is a partnership consisting of Arguello Inc.; Devon Energy Production Company LP; Anadarko US Offshore Corporation; Whiting Oil and Gas Corporation; Koch Exploration Company, LLC; Harvest Energy, Inc.

b. Primary Contact Name: David Rose
Primary Contact Company: Freeport-McMoRan Oil and Gas LLC (FMOG) - Operator

c. ERC Application Date: June 1, 2017

d. ERC Application Completeness Date: June 29, 2017

e. ERC Stationary Source Name: The Point Arguello Project
ERC Stationary Source Number: 01325

f. ERC Facility Name: Platform Hermosa
ERC Facility Number: 08014

g. ERC Source:
[ ] ATC Permit Required. ATC Number:
[x] PTO Canceled. PTO Number: PT-70/Reeval 9104-R5
[x] PTO Modification Required: PT-70/Reeval 9104-R5
[ ] Exempt:

h. ERC Source Type: Stationary

II. BACKGROUND

This Decision of Issuance (DOI) is for the creation of NO_x, ROC, CO, SO_x, PM and PM_{10} Emission Reduction Credits (ERCs) associated with the shutdown of various emission sources on Platform Hermosa. These include turbine generators, various tanks, a disposal pile and fugitive emission components. This equipment is currently permitted on PTO 9104-R5 and has been in place and operating for the entire baseline period.

III. EMISSION REDUCTION CREDIT QUALIFICATION

a. Total ERCs Approved:

NO_x	=	33.503 tpy
ROC	=	34.229 tpy
CO	=	26.920 tpy
SO_x	=	0.005 tpy
PM_{10}	=	1.532 tpy
PM	=	1.532 tpy

b. Number of Emission Elements: 4

c. Emission Element Data:

c.1 Emission Element Name: Turbines Generators

- EE/DOI Number: 01/109

- Emission Element Description: Three turbine driven electrical generators powered by 2.800 MW Solar Centaur T-4000 gas turbines and one generator powered by a 3.100 MW SoLoNox T-4701S gas turbine. The turbines are equipped with water injection to provide control of NO_x emissions.

- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. These units operated continuously during the baseline period. NO_x, ROC, and CO emissions for these units are based on predictive algorithms developed from source test data (Ref: PT-70/Reeval 9104-R5). Emissions are calculated based on these algorithms and reported fuel use. SO_x emissions are based on mass balance and PM and PM_{10} emissions are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93) and reported fuel use. PM and PM_{10} emissions are adjusted with a technical uncertainty factor. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used? [x] Yes [ ] No

- Technical Uncertainty Factor:

  A technical uncertainty factor of 20 percent is applied to PM and PM_{10} emissions since there are no measured PM and PM_{10} emission factors.

- ERC Due To: [x] Platform Shutdown

- For Shutdowns/Reduction in Throughput:

  [ ] BACT Discounted
  [x] 20 Percent Minimum Discount

- RACT/SIP Discounted [ ] Yes [x] No

- RACT/SIP Applicable Rules: The District does not have a rule pertaining to gas turbines, however, the subject turbines are equipped with water injection that constitutes RACT. Since these units are equipped with water injection, water injection is considered RACT for the purposes of this DOI even though there is no rule requiring water injection for turbines. The basis for this determination is that at the time water injection was installed on the turbines, the District was considering a rule for this control requirement, however since the turbines were already equipped with water injection, the District decided a rule was not necessary. Further, if water injection had not been installed on these units, the District would have adopted a RACT rule requiring it due to our nonattainment status.

- Special ERC Restrictions? [ ] Yes [x] No

- ERC Termination Date: None.

- Emission Element 1/109 Total Approved ERCs:

NO_x	=	33.503	tpy
ROC	=	5.590	tpy
CO	=	26.920	tpy
SO_x	=	0.005	tpy
PM_{10}	=	1.532	tpy
PM	=	1.532	tpy

- Are There Emission Element-Specific Conditions? [x] Yes [ ] No

(1) Decommissioning of the Turbines. The owner/operator shall permanently decommission the turbines by disconnecting and purging all fuel gas lines associated with each turbine and applying blind flanges to each line opening and to the corresponding fuel intake on each turbine. The owner/operator shall provide documentation that demonstrates the decommissioning of these units (e.g., pictures identifying each unit and the disconnected fuel gas lines).

If the turbines are removed from the platform and relocated for use elsewhere, the owner/operator shall provide the District a signed declaration along with proof that the turbines were sold or otherwise transferred to a new owner who operates the turbines outside of the State of California. The declaration shall specify the location of the turbines and the identity of the new owner. The owner/operator shall provide the new owner a written notification stating that these turbines must not be operated, sold, or transferred to the State of California. A copy of the notification shall be provided to the District.

- Attachments [x] Yes [ ] No

Attachment A *(ERC Calculations*)

c.2 Emission Element Name: Fugitive Hydrocarbon Components

- EE/DOI Number: 02/109

- Emission Element Description: Fugitive hydrocarbon components in oil and gas service associated with the processing equipment on Platform Hermosa.

- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. The component leakpath method (District P&P 6100.061) is used to calculate the ERCs from fugitive emissions. These component leakpaths represent the oil and gas component leakpaths permitted on Platform Hermosa and listed in PTO 9104-R5 during the baseline period. The number of components varied over the baseline period, however the components for each year were totaled and averaged over the three-year baseline period. See *Evaluation Criteria Summary* below for further detail..

- Technical Uncertainty Factor Used? [ ] Yes [x] No

- ERC Due To: [x] Platform Shutdown

- For Shutdowns/Reduction in Throughput: Platform Shutdown

  [ ] BACT Discounted
  [x] 20 Percent Minimum Discount

- RACT/SIP Discounted: [ ] Yes [x] No

- RACT/SIP Applicable Rules: Rule 331

- Amount of RACT/SIP Discount: Baseline emissions include implementation of Rule 331 requirements as well as NSR and NSPS permit requirements. No additional adjustments are needed.

- Special ERC Restrictions? [x] Yes [ ] No

  Fugitive ERCs are subject to restrictions. See conditions below.

- ERC Termination Date: None.

- Emission Element 2/109 Total Approved ERCs:

  ROC = 28.588 tpy

- Attachments [x] Yes [ ] No

  Attachment A *(ERC Calculations)*

- Are There Emission Element-Specific Conditions? [x] Yes [ ] No

(1) ERC Value Recalculation: The fugitive ERCs authorized by this DOI are subject to re-assessment, and as such, the amount of ERCs may change. At the time of ERC usage, the fugitive hydrocarbon emission calculation methodology (emission factors, control efficiencies) used to calculate the value of the ERCs may be reevaluated based on current District-approved methods. Based on this reevaluation, the District may revise the value of this DOI and any associated ERC certificates accordingly.

(2) Restriction of ERC Use: The fugitive ERCs may only be used to offset fugitive hydrocarbon emissions. The following equipment types are considered fugitive emission sources for the purposes of this Condition: component leak paths in hydrocarbon service (e.g., valves, flanges, connectors, PRVs, pump seals, compressor seals), sumps, pits, oil/water separators (including waste water tanks), oil and gas wells, well cellars, floating roof tanks and fixed roof tanks that are connected to a vapor recovery/control system.

(3) Disposal of Fugitive Hydrocarbon Components: The owner/operator shall permanently remove from service all the fugitive hydrocarbon components associated with the component leakpaths listed in Attachment A. All piping and associated components shall be purged of hydrocarbons and shall be physically disconnected from all process equipment. The owner/operator shall provide documentation that demonstrates this (e.g., pictures showing the disconnection of all piping and from all platform processing equipment).

c.3 Emission Element Name: Disposal Pile

- EE/DOI Number: 03/109

- Emission Element Description: The disposal pile is a component of the platform wastewater treatment system. It is an uncovered basin and is utilized to treat wastewater that is then pumped to the oil/water separator.

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- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. ERCs are based on days of operation, pile area and an established lb/ft^2-day emission factor. This unit was operated continuously throughout the baseline period. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used? [ ] Yes [x] No

- ERC Due To: [x] Platform Shutdown

- For Shutdowns/Reduction in Throughput:

  [ ] BACT Discounted
  [x] 20 Percent Minimum Discount

- RACT/SIP Discounted [ ] Yes [x] No

- RACT/SIP Applicable Rules: The disposal pile is subject to Rule 325. No additional adjustments are needed.

- Special ERC Restrictions? [x] Yes [ ] No

  Emissions from the disposal pile is classified as fugitive emissions and these ERCs are subject to restrictions. See conditions below.

- ERC Termination Date: None.

- Emission Element 3/109 Total Approved ERCs:

  ROC = 0.015 tpy

- Are There Emission Element-Specific Conditions? [x] Yes [ ] No

  (1) ERC Value Recalculation: The fugitive ERCs authorized by this DOI are subject to re-assessment, and as such, the amount of ERCs may change. At the time of ERC usage, the fugitive hydrocarbon emission calculation methodology (emission factors, control efficiencies) used to calculate the value of the ERCs may be reevaluated based on current District-approved methods. Based on this reevaluation, the District may revise the value of this DOI and any associated ERC certificates accordingly.

  (2) Restriction of ERC Use: The fugitive ERCs may only be used to offset fugitive hydrocarbon emissions. The following equipment types are considered fugitive emission sources for the purposes of this Condition: component leak paths in hydrocarbon service (e.g., valves, flanges, connectors, PRVs, pump seals, compressor seals), sumps, pits, oil/water separators (including waste water tanks), oil and gas wells, well cellars, floating roof tanks and fixed roof tanks that are connected to a vapor recovery/control system.

  (3) Decommissioning of Disposal Pile: The owner/operator shall permanently remove the disposal pile from service by physically disconnecting each from all processing equipment. This equipment shall be made inoperable for any future use. The owner/operator shall provide documentation that demonstrates this, (e.g., pictures showing that the disposal pile is disconnected from active service and drained of all hydrocarbons).

- Attachments [x] Yes [ ] No

  Attachment A *(ERC Calculations*)

c.4 Emission Element Name: Tanks

- EE/DOI Number: 04/109

- Emission Element Description: Tanks included in this emission element are the Sump Tank, Produced Water Surge Tank, and the Sump Deck Tank. Each tank is a component of the platform wastewater treatment system and subject to Rule 325.

- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. ERCs are based on days of operation, tank area and an established lb/ft^2-day emission factor contained in PTO 9104-R5. These units operated continuously throughout the baseline period.

- Technical Uncertainty Factor Used? [ ] Yes [x] No

- ERC Due To: [x] Platform Shutdown

- For Shutdowns/Reduction in Throughput:

  [ ] BACT Discounted
  [x] 20 Percent Minimum Discount

- RACT/SIP Discounted [ ] Yes [x] No

- RACT/SIP Applicable Rules: The tanks are subject to Rule 325. No additional adjustments are needed.

- Special ERC Restrictions? [x] Yes [ ] No

  Emissions from these tanks are classified as fugitive emissions and these ERCs are subject to restrictions. See conditions below.

- ERC Termination Date: None.

- Emission Element 4/109 Total Approved ERCs:

  ROC = 0.031 tpy

- Are There Emission Element-Specific Conditions? [x] Yes [ ] No

  (1) ERC Value Recalculation: The fugitive ERCs authorized by this DOI are subject to re-assessment, and as such, the amount of ERCs may change. At the time of ERC usage, the fugitive hydrocarbon emission calculation methodology (emission factors, control efficiencies) used to calculate the value of the ERCs may be reevaluated based on current District-approved methods. Based on this reevaluation, the District may revise the value of this DOI and any associated ERC certificates accordingly.

(2) Restriction of ERC Use: The fugitive ERCs may only be used to offset fugitive hydrocarbon emissions. The following equipment types are considered fugitive emission sources for the purposes of this Condition: component leak paths in hydrocarbon service (e.g., valves, flanges, connectors, PRVs, pump seals, compressor seals), sumps, pits, oil/water separators (including waste water tanks), oil and gas wells, well cellars, floating roof tanks and fixed roof tanks that are connected to a vapor recovery/control system.

(3) Decommissioning of the Tanks: The owner/operator shall permanently remove the tanks from service by physically disconnecting them from all processing equipment. This equipment shall be made inoperable for any future use. The owner/operator shall provide documentation that demonstrates this (e.g., pictures showing that the floatation cell is disconnected from active service and drained of all hydrocarbons.)

- Attachments [x] Yes [ ] No

Attachment A *(ERC Calculations)*

c.5 Emission Element Name: Oil/Water Separator

- EE/DOI Number: 05/109

- Emission Element Description: The oil/water is a separator utilized in the platform wastewater system.

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- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. ERCs are based on days of operation, tank area and an established lb/ft^2-day emission factor. This unit operated continuously throughout the baseline period. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used? [ ] Yes [x] No

- ERC Due To: [x] Platform Shutdown

- For Shutdowns/Reduction in Throughput:

[ ] BACT Discounted
[x] 20 Percent Minimum Discount

- RACT/SIP Discounted [ ] Yes [x] No

- RACT/SIP Applicable Rules: The oil/water separator is subject to Rule 325. No additional adjustments are needed.

- Special ERC Restrictions? [x] Yes [ ] No

Emissions from the oil/water separator is classified as fugitive emissions and these ERCs are subject to restrictions. See conditions below.

- ERC Termination Date: None.

- Emission Element 5/109 Total Approved ERCs:

  ROC = 0.004 tpy

- Are There Emission Element-Specific Conditions? [x] Yes [ ] No

  (1) ERC Value Recalculation: The fugitive ERCs authorized by this DOI are subject to re-assessment, and as such, the amount of ERCs may change. At the time of ERC usage, the fugitive hydrocarbon emission calculation methodology (emission factors, control efficiencies) used to calculate the value of the ERCs may be reevaluated based on current District-approved methods. Based on this reevaluation, the District may revise the value of this DOI and any associated ERC certificates accordingly.

  (2) Restriction of ERC Use: The fugitive ERCs may only be used to offset fugitive hydrocarbon emissions. The following equipment types are considered fugitive emission sources for the purposes of this Condition: component leak paths in hydrocarbon service (e.g., valves, flanges, connectors, PRVs, pump seals, compressor seals), sumps, pits, oil/water separators (including waste water tanks), oil and gas wells, well cellars, floating roof tanks and fixed roof tanks that are connected to a vapor recovery/control system.

  (3) Decommissioning of Oil/Water Separator: The owner/operator shall permanently remove the oil/water separator from service by physically disconnecting it from all processing equipment. This equipment shall be made inoperable for any future use. The owner/operator shall provide documentation that demonstrates this (e.g., pictures showing that the equipment is disconnected from active service and drained of all hydrocarbons).

- Attachments [x] Yes [ ] No

  Attachment A *(ERC Calculations*)

c.6 Decision of Issuance 109 Conditions:

  (1) ERC Certificate: To obtain the ERC Certificate, the owner/operator shall either (a) cancel the operating permit(s) for the platform or (b) modify the operating permit(s) to remove the affected equipment/devices from the permit.

  (2) District Inspection: The owner/operator shall arrange for a District inspection to verify that all the equipment associated with the ERCs generated by this DOI has been decommissioned in accordance with the conditions of this DOI. A minimum of 21-calendar days advance notice shall be given to the District.

(3) Life of DOI: Decision of Issuance 109 remains active for the life of the ERCs. This is defined as (a) the ERCs are being used by a project as approved by the District, or (b) the ERCs remain unused in an active ERC certificate.

(4) Use of the DOI: This DOI is valid for one year from the date stamped below if unused. "Use" for the purposes of this DOI means commencement of verifiable work efforts necessary to decommission the platform. Cessation of all oil and gas production and initiation of permanent well plugging and abandonment activities constitutes use of the DOI.

(5) ERCs Use Restriction – Project Abandonment: Pursuant to Section IV.B.(2)(e) of the Third Amendment to the OCS Ozone Mitigation Agreement (May 20, 1997), the ERCs generated by this DOI may only be used for mitigation of abandonment activities of The Point Arguello Project, if required.

(6) ERCs Transfer to the District: Pursuant to Section IV.B.(2)(e)(i) of the Third Amendment to the OCS Ozone Mitigation Agreement (May 20, 1997), the owner/operator transfers and conveys to the District all rights and claim to ownership of the emission reductions achieved through the shutdown of the OCS portions of the Point Arguello Project. Such transfer of rights shall be effective upon abandonment of the OCS platforms (or any portion thereof). If a partial abandonment occurs, then the owner/operator transfers the rights to all emission reductions achieved through the shutdown of each OCS platform and related OCS emissions as each platform abandonment occurs, unless required for abandonment of the remaining platforms(s).

d. *Evaluation Criteria Summary*: The DOI application was submitted pursuant to the criteria listed in Rule 806. The ERCs meet the basic qualification criteria of being surplus, quantifiable, permanent and enforceable.

Surplus. In order for the ERCs to be valid, they must be surplus to the District's Clean Air/Ozone Plan.

Turbine Generators. The 2013 CAP and 2016 Ozone Plan do not require any further or future control requirements for these units, thus the associated ERCs are considered surplus.

Fugitive Components. The fugitive components are subject to District Rule 331 and have been operating in compliance with this rule. Consistent with Rule 806, these ERCs will be evaluated against the rules in effect at the time of use. The ERCs associated with the fugitive components are considered surplus.

Disposal Pile. The disposal pile is subject District Rule 325 and has been operating in compliance with this rule. Any further reductions of emissions are considered surplus.

Tanks. The tanks are subject District Rule 325 and have been operating in compliance with this rule. Any further reductions of emissions are considered surplus.

Oil/Water Separator. The oil/water separator is subject District Rule 325 and has been operating in compliance with this rule. Any further reductions of emissions are considered surplus.

Quantifiable. Attachment A provides the District approved emissions and ERC calculations for all equipment.

Turbine Generators. NO_x, ROC and CO emissions from the turbine generators are based on predictive algorithms developed from source testing. The algorithms consist of multiple constants and require actual fuel flow rates to generate emissions. The owner/operator was required to report these fuel rates and the emissions generated from these fuel rates. The fuel rates and resulting emissions for the June 2012 to May 2015 baseline period are included in the application for this DOI and are reproduced in Tables 2 and 3 of Attachment A. These fuel rates and emissions were reviewed for accuracy and consistency with the reported fuel and emission rates in the Semi-Annual Compliance Verification Reports for the baseline years. These emissions constitute the basis of the ERCs. SO_x emissions are based on mass balance and PM and PM_{10} emissions are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93) and actual fuel use. A technical uncertainty factor of 20 percent is applied to PM and PM_{10} emissions since there are no measured PM or PM_{10} emission factors. These ERCs are considered quantifiable.

Fugitive Hydrocarbon Emissions. The component leakpath counts were verified by reviewing the facility I&M inventory subject to Rule 331 inspections and permitted in PTO 9104-R3/R4 during the baseline period. The component leakpath method (District P&P 6100.061) is used to calculate fugitive emissions from Platform Hermosa and is used as the basis for calculating ERCs associated with these emissions. The average annual number of component leakpaths (clps) during the baseline period is summarized in Table 2 of Attachment A. These clp counts were used in conjunction with the clp emission factors that are used in PTO 9103-R5 to determine emissions and are reproduced in Table 4. These emissions constitute the basis of the ERCs. These credits are subject to the standard District restrictions regarding the use of fugitive hydrocarbon ERCs. The ERCs are considered quantifiable.

Tanks. Emissions from the tanks are based on lb/ft2-day emission factors established in PTO 9104-R5 and reported days of operation. The owner/operator was required to report these days of operation that are included in the DOI application. The operational days during the baseline period were reviewed and determined to be consistent with the days reported in the Semi-Annual Compliance Verification Reports for the baseline period. The operating days for the baseline period are reproduced in Table 2 and emission factors are provided in Table 4 of Attachment A. These emissions constitute the basis of the ERCs. These credits are subject to the standard District restrictions regarding the use of fugitive hydrocarbon ERCs. The ERCs are considered quantifiable.

Disposal Pile. Emissions from the disposal pile are based on lb/ft2-day emission factors established in PTO 9104-R5 and reported days of operation. The owner/operator was required to report these days of operation that are included in the DOI application. The operational days during the baseline period were reviewed and determined to be

consistent with the days reported in the Semi-Annual Compliance Verification Reports for the baseline period. The operating days for the baseline period are reproduced in Table 2 and emission factors are provided in Table 4 of Attachment A. These emissions constitute the basis of the ERCs. These credits are subject to the standard District restrictions regarding the use of fugitive hydrocarbon ERCs. The ERCs are considered quantifiable.

Oil/Water Separator. Emissions from the separator are based on lb/ft2-day emission factors established in PTO 9104-R5 and reported days of operation. The owner/operator was required to report these days of operation that are included in the DOI application. The operational days during the baseline period were reviewed and determined to be consistent with the days reported in the Semi-Annual Compliance Verification Reports for the baseline period. The operating days for the baseline period are reproduced in Table 2 and emission factors are provided in Table 4 of Attachment A. These emissions constitute the basis of the ERCs. These credits are subject to the standard District restrictions regarding the use of fugitive hydrocarbon ERCs. The ERCs are considered quantifiable.

Permanent. In order to assure the permanence of the ERCs, the owner/operator is required to demonstrate that each equipment item subject to this DOI has been permanently removed from service and made inoperable so that each is unable to function in the future. This DOI requires a District inspection and documentation to verify the permanent removal of the subject equipment. The ERCs are considered permanent.

Enforceable. PTO 9104-R5 will be cancelled or modified prior to the issuance of the ERC Certificate. The ERCs are considered enforceable.

e. Recommendation: Based on this DOI and the attachment to this DOI, approval of the ERCs is recommended.

Jim Menno — Evaluator

January 2019 — Date

AIR POLLUTION CONTROL OFFICER

DATE

Attachments:

A. Emission Reduction Credit Calculations

ATTACHMENT A

Platform Hermosa DOI 109
Table 1. Operating Equipment

APCD Device No.	Description	Manufacturer	Model	Size	Units	Operator ID
FUGITIVES						
103071	Oil - controlled	-	-	-	-	-
103069	Gas - controlled	-	-	-	-	-
103069	Gas - Monthly Valves	-	-	-	-	-
103069	Gas - Monthly Connections	-	-	-	-	-
SUMPS/TANKS/SEPARATORS						
5413	Produced Water Surge Tank	C.E. Natco	-	30	ft^2	T-31
5414	Disposal Pile	N.K.K	-	8	ft^2	T-75
5415	Sump Tank	C.E. Natco	-	8	ft^2	T-72
5416	Sump Deck Tank	n/a	-	48	ft^2	T-74
5420	Oil/Water Separator	Pace Setter	-	50	ft^2	500B-7
TURBINE GENERATORS						
5040	Turbine Generator (G-91)	SoLoNox	T-4701S	3.1	megawatts	G-091
5041	Turbine Generator (G-92)	Solar Centaur	T-4501	2.8	megawatts	G-092
5042	Turbine Generator (G-93)	Solar Centaur	T-4000	2.8	megawatts	G-093
5043	Turbine Generator (G-94)	Solar Centaur	T-4000	2.8	megawatts	G-094

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Table 2. Operating Data

Description	APCD DevNo	Units	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Fugitive Components																					
Oil - Controlled	103071	avg. clp	9658	9658	9658	9658	9658	9658	9658	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804
Gas - Controlled	103069	avg. clp	7326	7326	7326	7326	7326	7326	7326	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968
Gas - Monthly Valves	103069	avg. clp	674	674	674	674	674	674	674	675	675	675	675	675	675	675	675	675	675	675	675
Gas - Monthly Connections	103069	avg. clp	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
Sumps/Tanks/Separators																					
Produced Water Surge Tank	5413	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Disposal Pile	5414	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Sump Tank	5415	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Sump Deck Tank	5416	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Oily Water Separator	5420	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Turbine Generators																					
G-91	5040	MMscf	1.80	0.00	0.00	0.01	0.11	0.31	0.00	0.00	0.00	10.55	6.77	5.12	15.44	17.03	15.11	17.72	13.51	9.59	0.00
G-92	5041	MMscf	54.93	6.88	9.98	18.51	6.39	9.18	9.18	0.00	3.02	14.26	17.46	20.22	6.29	0.02	0.00	0.00	3.93	9.66	20.55
		Gallons	43752	136122	110478	20274	132198	10608	86040	186924	151692	40452	9348	3684	1356	366.0	594.0	4218.0	1104	6.0	0.0
G-93	5042	MMscf	11.45	4.06	0.43	0.10	2.38	2.37	0.52	0.40	0.16	0.03	0.17	0.00	0.35	0.00	0.13	0.13	0.02	0.00	0.00
		Gallons	130432	3383	5829	19432	0	5249	301	0	1334	1121.4	681	3761	3103	0	0	0	0	0	0
G-94	5043	MMscf	32.64	14.24	11.39	5.35	13.00	10.54	10.54	20.67	17.14	11.87	12.16	15.61	15.67	18.12	18.66	18.48	18.07	18.66	21.04
		Gallons	22459	37515	98422	128989	63652	1075	83173	0	8553	0	0	8	955	0	0	104	42.6	217.2	192.0

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Table 2. Operating Data (cont.)

Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Annual Average 6/2012 - 5/2015	Units
Fugitive Components																		
7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	7804	**8165**	avg. clp
11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	11968	**11065**	avg. clp
675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	**675**	avg. clp
1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	**1350**	avg. clp
Sumps/Tanks/Separators																		
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**	day
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**	day
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**	day
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**	day
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**	day
Turbine Generators																		
6.86	0.36	0.17	7.66	16.06	11.75	7.69	18.72	13.20	15.88	14.25	15.79	11.83	16.85	4.73	0.79	0.00	**92**	MMscf
15.25	18.59	18.23	10.22	0.00	5.94	13.78	9.87	13.54	18.70	17.22	9.59	11.39	1.75	15.37	19.19	17.42	**142**	MMscf
16.8	1.8	181.8	0.0	0.0	45.0	0.0	0.0	0.0	102.6	0.0	0.0	0.0	0.0	0.0	0.0	47.4	**313204**	Gallons
0.46	0.08	1.48	0.27	2.99	0.61	0.67	3.12	0.00	0.03	0.15	3.50	0.04	0.15	0.18	0.29	0.24	**12**	MMscf
246	0	153	0	52	0	0	0	0	0	1900	0	0	0.0	0.0	0.0	445.8	**59141**	Gallons
18.65	18.63	16.25	19.38	19.70	19.67	17.98	17.86	2.88	4.11	6.35	9.54	16.32	5.28	16.17	20.39	17.67	**184**	MMscf
48.0	2038.2	846.0	0.0	784.8	0.0	172.8	0.0	0.0	226	0	1894	0.0	0.0	0.0	0.0	534.6	**150633**	Gallons

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Table 3: Baseline Monthly Emissions
Turbine Generators

G91	NOx	ROC	CO	SOX
Jun-12	133.45	98.98	338.38	0.1
Jul-12	0	0	0	0
Aug-12	0	0	0	0
Sep-12	0.49	11.7	15.49	0
Oct-12	6.7	19.93	38.01	0.0025
Nov-12	19.07	62.17	110.08	0
Dec-12	0	0	0	0
Jan-13	0	0	0	0
Feb-13	0	0	0	0
Mar-13	690.44	536.84	1982.64	0.2005
Apr-13	390.65	219.87	1099.98	0.1
May-13	246.93	151.66	857.85	0.1053
Jun-13	785.01	539.92	2506.57	0.3
Jul-13	587.45	248.45	2357.75	0.3747
Aug-13	762.89	287.86	2226.07	0.2815
Sep-13	858.47	340.45	2555.16	0.4
Oct-13	668.47	472.71	2492.85	0.2595
Nov-13	466.19	291.1	1525.4	0.2
Dec-13	0	0	0	0
Jan-14	338.66	422.15	1357.09	0.1321
Feb-14	19.54	175.83	275.59	0.0065
Mar-14	9.41	37.97	74.09	0.003
Apr-14	396.26	151.53	1100.05	0.65
May-14	837.79	353.12	2414.46	0.32
Jun-14	610.85	270.59	1778.63	0.24
Jul-14	458.26	198.9	1187.01	0.16
Aug-14	1302.76	306.09	2667.25	0.5
Sep-14	923.32	279.66	1936.46	0.29
Oct-14	1035.11	447.99	2522.53	0.32
Nov-14	956.08	236.04	1975.11	0.31
Dec-14	1073.52	327.26	2334.69	0.33
Jan-15	832.89	171.84	1628.31	0.25
Feb-15	1207.12	291.05	2368.94	0.34
Mar-15	346.18	157.43	802.06	0.09
Apr-15	56.82	34.6	140.69	0.01
May-15	0	0	0	0
Annual Average Pounds/ Year	**5340.26**	**2381.23**	**14223.06**	**2.091867**
Tons/ Year	**2.67013**	**1.190615**	**7.111532**	**0.001046**

G-92	NOx	ROC	CO	SOX
Jun-12	3625.41	472.93	2258.37	0.4905
Jul-12	4473.05	873.22	4179.63	1.0976
Aug-12	4550.42	795.92	3990.44	0.9796
Sep-12	4490.98	563.11	3047.74	0.4957
Oct-12	4318.33	872.56	3949.07	1.1209
Nov-12	3671.41	472.98	2349.64	0.4283
Dec-12	3994.17	902.64	2893.71	0.8012
Jan-13	4149.65	1219.22	3870.08	1.2771
Feb-13	3989.9	927.58	3811.65	1.2748
Mar-13	3843.66	648.67	2579.77	0.5452
Apr-13	3877.5	575.08	2349.18	0.381
May-13	4404.43	546.56	2721.72	0.4069
Jun-13	1372.51	179.61	826.84	0.146
Jul-13	12.27	4.95	7.45	0.0028
Aug-13	13.37	6.48	9.45	0.0043
Sep-13	98.91	31.91	89.32	0.03
Oct-13	875.85	117.61	527.78	0.0778
Nov-13	2047.61	252.68	1238.32	0.181
Dec-13	4371.23	526.25	2666.58	0.399
Jan-14	3233.79	391.57	1968.07	0.2948
Feb-14	4006.14	474.69	2463.71	0.4001
Mar-14	3941.65	506.78	2349.89	0.3674
Apr-14	2157.87	257.75	1321.41	0.2
May-14	0	0	0	0
Jun-14	1352.32	164.32	821.61	0.12
Jul-14	3099.24	386.06	1864.33	0.27
Aug-14	2091.38	493.62	1211.21	1.39
Sep-14	3099.39	492.49	1804.16	0.66
Oct-14	4205.36	516.37	2552.46	0.38
Nov-14	2328.08	470.58	3841.85	0.37
Dec-14	2169.63	266.24	1311.82	0.2
Jan-15	2561.22	310.12	1557.66	0.23
Feb-15	396.59	55.57	226.66	0.03
Mar-15	3452.32	415.4	2109	0.33
Apr-15	4247.74	510.51	2598.5	0.37
May-15	3782.89	470.92	2278.2	0.33
Annual Average Pounds/ Year	**34768.76**	**5390.983**	**24549.09**	**5.360667**
Tons/ Year	**17.38438**	**2.695492**	**12.27455**	**0.00268**

G-93	NOx	ROC	CO	SOX
Jun-12	4104.98	995.09	3866.24	0.9938
Jul-12	954.13	120.33	635.74	0.1097
Aug-12	251.41	47.39	229.28	0.0524
Sep-12	473.88	112.6	488.78	0.1407
Oct-12	545.27	63.27	339.77	0.0721
Nov-12	655.89	101.32	445.7	0.0911
Dec-12	127.35	19.48	75.15	0.0179
Jan-13	90.63	11.1	55.09	0
Feb-13	67.85	12.89	55.19	0.0069
Mar-13	36.23	13.95	26.76	0.0088
Apr-13	55.33	15.14	32.2	0.007
May-13	89.43	29.19	79.61	0.0268
Jun-13	156.9	51.2	102.39	0.0266
Jul-13	0	0	0	0
Aug-13	29.3	5.01	15.21	0.0025
Sep-13	24.85	3.62	13.53	0.003
Oct-13	0.18	0	0.1	0
Nov-13	0	0	0	0
Dec-13	0	0	0	0
Jan-14	102.98	18.74	58.68	0.01
Feb-14	17.07	2.18	10.15	0.0013
Mar-14	333.78	48.6	189.33	0.0316
Apr-14	60.51	7.53	36.31	0.01
May-14	661.75	82.36	399.56	0.05
Jun-14	136.42	16.75	82.23	0.01
Jul-14	150.19	23.67	80.52	0.01
Aug-14	705.11	174.81	392.07	0.39
Sep-14	0	0	0	0
Oct-14	6.14	1.13	3.1	0
Nov-14	60.51	18.93	79.47	0.01
Dec-14	780.46	98.67	467.04	0.08
Jan-15	9.19	1.51	4.81	0
Feb-15	33.31	5.87	17.02	0
Mar-15	38.57	5.22	22.23	0
Apr-15	62.59	8.83	35.89	0.01
May-15	61.26	10.82	38.79	0.01
Annual Average Pounds/ Year	**3627.817**	**709.0667**	**2792.647**	**0.7274**
Tons/ Year	**1.813908**	**0.354533**	**1.396323**	**0.000364**

G-94	NOx	ROC	CO	SOX
Jun-12	0	0	0	0
Jul-12	3758.43	531.58	2716.23	0.5199
Aug-12	4439.68	744.25	3790.28	1.0071
Sep-12	3954.99	809.16	3694.61	1.0312
Oct-12	4180.9	743.65	3029.05	0.7525
Nov-12	4128.32	512.06	2511.38	0.4399
Dec-12	4124.67	867.14	2992.94	0.8815
Jan-13	4450.05	522.69	2755.79	0.682
Feb-13	3867.35	511.83	2407.61	0.5234
Mar-13	2458.97	331.92	1436.73	0.2512
Apr-13	2516.64	315.61	1518.73	0.224
May-13	3228.02	371.03	2028.78	0.3052
Jun-13	3287.88	398.24	2017.62	0.3176
Jul-13	3808.21	500.9	2237.14	0.3919
Aug-13	3892.28	522.44	2267.92	0.3628
Sep-13	3854.27	498.1	2279.51	0.376
Oct-13	3804.84	507.09	2208.96	0.3594
Nov-13	3879.83	503.87	2292.1	0.406
Dec-13	4350.36	527.05	2648.89	0.4026
Jan-14	3871.4	471.44	2350.96	0.3572
Feb-14	3937.86	475.61	2433.99	0.3927
Mar-14	3422.26	436.17	2056.16	0.3269
Apr-14	4009.02	480.16	2451.39	0.36
May-14	4141.15	524.64	2481.54	0.38
Jun-14	4138.6	505.12	2507.19	0.39
Jul-14	3759.05	457.62	2287.6	0.34
Aug-14	3755.28	697.98	2219.11	1.59
Sep-14	1571.53	265.1	923.41	0.46
Oct-14	848.53	109.16	510.24	0.08
Nov-14	797.52	155.88	1301.52	0.13
Dec-14	2044.85	273.92	1231.02	0.21
Jan-15	3400.25	414.91	2060.67	0.32
Feb-15	1096.85	134.34	666.7	0.1
Mar-15	3378.88	405.12	2067.46	0.34
Apr-15	4256.78	510.63	2606.78	0.38
May-15	3647.47	448.89	2214	0.33
Annual Average Pounds/ Year	**40020.99**	**5495.1**	**25734.67**	**5.240333**
Tons/ Year	**20.0105**	**2.74755**	**12.86734**	**0.00262**

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Table 4. Emission Factors

Description	Device Specifications		NOx	ROC	CO	SOx	PM	PM10	Units	Reference
			(lb / unit)							
Fugitive - Components										
Oil - controlled				0.0009					lb/day-clp	PTO 9104
Gas - controlled				0.0147					lb/day-clp	PTO 9104
Gas - Monthly Valves				0.0118					lb/day-clp	PTO 9104
Gas - Monthly Connections				0.0132					lb/day-clp	PTO 9104
Sumps, Tanks & Separators										
Produced Water Surge Tank	30	ft2		0.0006					lb/ft^2-day	PTO 9104
Disposal Pile	8	ft2		0.0126					lb/ft^2-day	PTO 9104
Sump Tank	8	ft2		0.0126					lb/ft^2-day	PTO 9104
Sump Deck Tank	48	ft2		0.0019					lb/ft^2-day	PTO 9104
Oily Water Separator	50	ft2		0.0006					lb/ft^2-day	PTO 9104

Platform Hermosa

Table 5. PM/PM_{10} Emission Factors

Turbine Generators	*Fuel*	*PM*	*PM_{10}*	*EF*	*Reference*
G-91	PG	2.963	2.963	lbs/MMscf	PTO 9104
G-92	PG	2.939	2.939	lbs/MMscf	PTO 9104
G-92	D2	0.007	0.007	lbs/gal	PTO 9104
G-93	PG	2.939	2.939	lbs/MMscf	PTO 9104
G-93	D2	0.007	0.007	lbs/gal	PTO 9104
G-94	PG	2.939	2.939	lbs/MMscf	PTO 9104
G-94	D2	0.007	0.007	lbs/gal	PTO 9104

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Table 6. Emission Reductions

Description	NOx	ROC	CO	SOx	PM	PM10
			(tons / year)			
Fugitive - Components						
Oil - controlled		1.308				
Gas - controlled		29.722				
Gas - Monthly Valves		1.453				
Gas - Monthly Connections		3.252				
Sumps, Tanks & Separators		35.74				
Produced Water Surge Tank		0.003				
Disposal Pile		0.018				
Sump Tank		0.018				
Sump Deck Tank		0.017				
Oily Water Tank		0.005				
Turbine Generators						
G-91	2.670	1.191	7.112	0.001	0.136	0.136
G-92	17.384	2.695	12.275	0.003	1.264	1.264
G-93	1.814	0.355	1.396	0.000	0.217	0.217
G-94	20.010	2.748	12.867	0.003	0.777	0.777
TOTAL	41.879	42.789	33.650	0.007	2.394	2.394

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Table 7. Emission Reduction Credits[1,2]

Description	NOx	ROC	CO	SOx	PM	PM10
			(tons / year)			
Fugitive - Components						
Oil - controlled		1.046				
Gas - controlled		23.778				
Gas - Monthly Valves		1.163				
Gas - Monthly Connections		2.602				
		28.588				
Sumps, Tanks & Separators						
Produced Water Surge Tank		0.003				
Disposal Pile		0.015				
Sump Tank		0.015				
Sump Deck Tank		0.013				
Oily Water Separator		0.004				
Turbine Generators						
G-91	2.136	0.952	5.689	0.001	0.087	0.087
G-92	13.908	2.156	9.820	0.002	0.809	0.809
G-93	1.451	0.284	1.117	0.000	0.139	0.139
G-94	16.008	2.198	10.294	0.002	0.497	0.497
TOTAL	33.503	34.229	26.920	0.005	1.532	1.532

[1] Rule 806 20% Shutdown Discount

[2] 20% Uncertainty Factor applied to PM and PM_{10}.