Santa Barbara County
Air Pollution Control District

PRELIMINARY
DECISION OF ISSUANCE NO. 110

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 Hidalgo
ERC Facility Number: 08015

g. ERC Source:
[ ] ATC Permit Required. ATC Number:
[x] PTO Canceled. PTO Number: PT-70/Reeval 9105-R5
[x] PTO Modification Required: PT-70/Reeval 9105-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} ERCs associated with the shutdown of various emission sources on Platform Hidalgo. These include turbine generators, various tanks, a disposal pile, floatation cell, oil/water separator and fugitive emission components. This equipment is currently permitted on PTO 9105-R5 and has been in place and operating for the entire baseline period.

III. EMISSION REDUCTION CREDIT QUALIFICATION

a. Total ERCs Approved:

NO_x	=	29.334 tpy
ROC	=	27.215 tpy
CO	=	22.743 tpy
SO_x	=	0.007 tpy
PM_{10}	=	1.730 tpy
PM	=	1.730 tpy

b. Number of Emission Elements: 5

c. Emission Element Data:

c.1 Emission Element Name: Turbine Generators

- EE/DOI Number: 01/110

- Emission Element Description: Three turbine driven electrical generators powered by three 2.800 megawatt Solar Centaur T-4000 gas turbines. 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 9105-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 1/110 Total Approved ERCs:

NO_x	=	29.334	tpy
ROC	=	6.103	tpy
CO	=	22.743	tpy
SO_x	=	0.007	tpy
PM_{10}	=	1.730	tpy
PM	=	1.730	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: 02/110

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

- 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 all the oil and gas component leakpaths permitted on Platform Hidalgo PTO 9105-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 2/110 Total Approved ERCs:

  ROC = 20.167 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: 03/110

- 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, disposal pile area and an established lb/ft^2-day emission factor listed in PTO 9105-R5. These units 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 3/110 Total Approved ERCs:

  ROC = 0.022 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 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: 04/110

- 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 9105-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 4/110 Total Approved ERCs:

  ROC = 0.220 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 Separators

- EE/DOI Number: 05/110

- Emission Element Description: The oil separators include the oil/water separator and an air floatation cell and are 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, unit surface area and an established lb/ft^2-day emission factor for the oil/water separator and on fluid throughput and a lb/MMgal emission factor for the floatation cell as listed in PTO 9105-R5. Each 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 and floatation cell are 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 5/110 Total Approved ERCs:

  ROC = 0.700 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.

  (1) 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.

  (2) Decommissioning of Oil Separators: The owner/operator shall permanently remove the oil/water separator and floatation cell 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 110 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 110 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 Separators. The oil/water separator and floatation cell are subject District Rule 325 and have 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 9105-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 9105-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 9105-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 9105-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 Separators. Emissions from the oil/water separator are based on lb/ft2-day emission factor and emissions from the floatation cell is based on a fluid throughput and a lb/MMgal emission factor as established in PTO 9105-R5 and the 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 9105-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

Date

AIR POLLUTION CONTROL OFFICER

DATE

Attachments:

A. Emission Reduction Credit Calculations

ATTACHMENT A

Platform Hidalgo DOI 110
Table 1. Operating Equipment

APCD Device No.	Description	Manufacturer	Model	Size	Units	Operator ID
FUGITIVES						
103244	Oil - controlled	-	-	-	-	-
103244	Gas - controlled	-	-	-	-	-
103244	Gas - Monthly Valves	-	-	-	-	-
103244	Gas - Monthly Connections	-	-	-	-	-
SUMPS/TANKS/SEPARATORS						
5436	Produced Water Surge Tank	Kaiser	-	36	ft^2	T-31
5437	Disposal Pile	N.K.K	-	10.5	ft^2	T-75
5438	Sump Tank	N.K.K	-	115	ft^2	T-72
5439	Sump Deck Tank	N.K.K.	-	72	ft^2	T-74
5441	Air Floataion Cell	U.S. Filter	-	750	gpm	M-31
103246	Oily Water Separator	Pace Setter	-	50	ft^2	M-70
TURBINE GENERATORS						
5070	G-92	Solar Centaur	T-4000	2800	kilowatts	G-92
5071	G-93	Solar Centaur	T-4000	2.8	kilowatts	G-93
5072	G-94	Solar Centaur	T-4700	2.8	kilowatts	G-94

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Table 2. Operational 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	103244	avg. clp	3764	3764	3764	3764	3764	3764	3764	6065	6065	6065	6065	6065	6065	5697	5697	5697	5697	5697	5697
Gas - Controlled	103244	avg. clp	3493	3493	3493	3493	3493	3493	3493	8365	8365	8365	8365	8365	8365	7513	7513	7513	7513	7513	7513
Gas - Monthly Valves	103244	avg. clp	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725
Gas - Monthly Connections	103244	avg. clp	1691	1691	1691	1691	1691	1691	1691	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Sumps/Tanks/Separators																					
Produced Water Surge Tank	5436	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Disposal Pile	5437	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Sump Tank	5438	day	30	31	31	30	31	30	31	31	28	31	30.00	31.00	30	31	31	30	31	30	31
Sump Deck Tank	5439	day	30	31	31	30	31	30	31	31	28	31	30.00	31.00	30	31	31	30	31	30	31
Air Flotation Cell	5441	MMgal	3.91	5.77	7.26	9.47	8.53	9.26	9.80	6.96	7.04	9.26	9.41	8.53	9.73	10.73	11.20	9.13	10.39	9.44	10.11
Oily Water Separator	103246	day	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31
Turbine Generators																					
G-92 Fuel Gas	5070	MMscf	0.0	0.0	0.0	4.4	4.4	0.0	9.8	0.9	4.2	15.2	15.6	16.2	7.9	15.4	11.1	17.0	17.6	16.8	17.2
G-92 Diesel		Gallons	0	0	0	6419	44509	170801	41216	153805	117337	41924	8563	1024	3736	1436	6079	7909	17656	16214	15967
G-93 Fuel Gas	5071	MMscf	9.9	17.0	21.0	18.8	9.4	0.0	7.0	0.0	0.0	4.4	11.6	15.4	12.7	12.1	17.2	15.1	15.0	17.1	19.5
G-93 Diesel		Gallons	44804	19891	27209	8561	68929	167440	17530	0	0	14	8569	5218	2504	6416	6290	15139	3647	7864	6552
G-94 Fuel Gas	5072	MMscf	13.4	11.5	3.8	14.5	11.4	0.0	15.8	15.2	13.8	14.6	8.5	6.9	17.7	12.4	9.5	0.2	3.0	4.2	2.1

Platform Hidlago DOI 110
Table 2. Operational 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**
6065	6065	6065	6065	6065	6065	5697	5697	5697	5697	5697	5697	6065	6065	6065	6065	6065	**5495**
8365	8365	8365	8365	8365	8365	7513	7513	7513	7513	7513	7513	8365	8365	8365	8365	8365	**7134**
725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	725	**725**
1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	**1497**
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**
9.48	8.75	6.15	5.31	6.57	6.46	5.43	7.55	6.54	4.58	5.40	2.26	1.73	4.33	6.53	8	6	**89**
31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	30	31	**365**
7.7	11.1	14.5	0.0	14.1	19.5	16.5	9.5	8.9	12.5	11.1	3.2	6.3	6.6	4.6	14.7	5.6	**113**
3658	18403	6556	298	42014	9660	2975	95034	26846	13355	32663	11098	2236	1724	20861	10412	77700	**343363**
16.1	16.9	13.4	19.4	15.2	20.0	16.5	14.5	12.9	17.7	12.2	4.6	6.9	18.9	15.4	9.3	0.0	**151**
2610	14527	40636	32194	40498	3002	29050	46708	35206	7060	50668	89828	56393	3127	40049	1382	0	**303172**
18.6	6.6	0.0	0.0	0.0	0.1	0.8	0.9	9.0	3.7	0.8	2.2	1.0	12.2	15.1	16.1	13.1	**93**

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Table 3. Turbine Emissions

G-92	NOx	ROC	CO	SOX
Jun-12	0	0	0	0
Jul-12	0	0	0	0
Aug-12	0	0	0	0
Sep-12	1013.11	181.84	616.15	0.2088
Oct-12	1898.94	454.46	1385.91	0.2024
Nov-12	3833.83	1232.06	3392.1	0.03
Dec-12	2892.27	605	1932.1	0.4802
Jan-13	3720.18	1338.39	3113.62	0.0616
Feb-13	3484.9	997.28	2877.65	0.2195
Mar-13	3919.36	738.35	2520.13	0.6359
Apr-13	3251.04	491.43	1949.86	0.6927
May-13	3133.77	431.21	1819.83	0.6984
Jun-13	1652.63	241.06	987.93	0.3958
Jul-13	3067.4	398.54	1832.18	0.7869
Aug-13	2346.84	331.45	1434.21	0.5851
Sep-13	3521.71	526.93	2101.52	0.9896
Oct-13	4026.34	600.95	2497	1.1446
Nov-13	3632.03	555.23	2265.96	0.972
Dec-13	3653.23	530.7	2316.81	0.9192
Jan-14	1538.43	207.71	955.29	0.3685
Feb-14	2432.38	364.08	1631.86	0.5663
Mar-14	2773.76	416.34	1669.99	0.7696
Apr-14	6.59	3.95	5.27	0
May-14	3548.23	649.12	2346.83	0.77
Jun-14	3879.95	541.11	2360.95	0.98
Jul-14	3265.2	433.17	1961.85	1.01
Aug-14	3872.59	884.74	2949.33	0.72
Sep-14	2198.07	420.39	1460.64	0.7
Oct-14	2747.46	462.57	1631.58	0.81
Nov-14	2998.78	533.39	1985.9	0.8
Dec-14	841.51	161.94	573.85	0.22
Jan-15	1306.21	203.44	1005.99	0
Feb-15	1271.29	166.87	775.58	0.38
Mar-15	1303.68	246.21	921.94	0.23
Apr-15	2895.7	416.21	1823.7	0.83
May-15	2740.48	820.98	2057.74	0.27
Annual Average Pounds/ Year	**29555.96**	**5529.033**	**19720.42**	**6.149033**
Tons/ Year	**14.77798**	**2.764517**	**9.860208**	**0.003075**

G-93	NOx	ROC	CO	SOX
Jun-12	2975.18	723.38	1987.25	0.4219
Jul-12	3619.34	612.53	2254.61	0.7475
Aug-12	4586.7	663.93	3079.87	0.09648
Sep-12	3835.44	566.57	2285.51	0.8618
Oct-12	3480.76	823.64	2437.25	0.438
Nov-12	3858.12	1233.46	3442.67	0.0294
Dec-12	1825.81	333.56	1179.78	0.3265
Jan-13	0	0	0	0
Feb-13	0	0	0	0
Mar-13	1102.06	141.86	651.8	0.1845
Apr-13	2693.99	426.96	1620.05	0.5151
May-13	3231	462.3	1919.89	0.6786
Jun-13	2672.92	363.58	1589.87	0.6931
Jul-13	2609.27	359.41	1609.85	0.601
Aug-13	4024.67	546.2	2431.01	0.8765
Sep-13	3721.29	613.59	2249.89	0.8749
Oct-13	3418.64	468.69	2033.5	0.9718
Nov-13	3588.44	520.83	2148.97	0.9385
Dec-13	4020.6	566.95	2408.69	1.0238
Jan-14	3237.74	420.01	1952.99	0.8067
Feb-14	3612.97	538.84	2254.59	0.8536
Mar-14	3514.6	880.98	2149	0.7131
Apr-14	4308.77	717.48	2900.76	1.13
May-14	3879.68	688.72	2563.99	0.85
Jun-14	3882.39	525.47	2301.26	1
Jul-14	3771.38	777.5	2299.2	1.01
Aug-14	4002.03	748.02	2690.31	1.07
Sep-14	3321.14	621.06	2228.32	0.97
Oct-14	3601.82	537.32	2121.01	1.2
Nov-14	3562.82	830.7	2349.46	0.85
Dec-14	3007.84	1381.88	1881.72	0.31
Jan-15	2691.13	972.85	1645.83	0
Feb-15	3815.1	493.39	2308.48	1.05
Mar-15	3947.42	681.62	2662.64	0.82
Apr-15	1850.2	231.21	1147.64	0.5
May-15	0	0	0	0
Annual Average Pounds/ Year	**37090.42**	**6824.83**	**23595.89**	**7.80426**
Tons/ Year	**18.54521**	**3.412415**	**11.79794**	**0.003902**

G-94 total	NOx	ROC	CO	SOX
Jun-12	911.06	281.77	1774.13	0.5703
Jul-12	751.55	249.09	1497.898	0.5012
Aug-12	276.5	243.06	732.6	0.1728
Sep-12	1050.45	296.05	1890.44	0.6625
Oct-12	750.01	236.05	1542.33	0.5363
Nov-12	0	0	0	0
Dec-12	1033.84	430.84	2242.02	0.7422
Jan-13	795.18	366.16	2222.74	0.6985
Feb-13	790.39	279.89	1914.49	0.6431
Mar-13	978.48	283.89	1930.07	0.6057
Apr-13	598.61	219.48	1178.87	0.4059
May-13	496.46	188.61	1037.81	0.2882
Jun-13	1135.05	314.63	2271.38	0.9288
Jul-13	810.75	258.52	1609.94	0.6166
Aug-13	611.93	202.06	1262.8	0.4725
Sep-13	6.07	88.21	108.43	0.002
Oct-13	189.1	257.21	600.5	0.1795
Nov-13	276.5	216.9	698.3	0.2494
Dec-13	138.12	140.98	510.03	0.0964
Jan-14	1250.69	291.75	2277.07	0.9399
Feb-14	476.5	168.43	872.68	0.3287
Mar-14	0	0	0	0
Apr-14	0	0	0	0
May-14	0	0	0	0
Jun-14	5.87	332.63	349.7	0
Jul-14	40.7	763.98	948.44	0.04
Aug-14	58.53	326.31	466.68	0.06
Sep-14	687.29	333.79	1312.8	0.72
Oct-14	278.49	123.29	561.94	0.27
Nov-14	62.96	61.23	168.32	0.06
Dec-14	169.89	100.64	410.07	0.14
Jan-15	89.68	47.53	158.38	0
Feb-15	1134.74	279.55	1666.97	0.67
Mar-15	1401.65	363.35	2089.46	0.8
Apr-15	1561.84	588.54	2425.65	0.9
May-15	1249.51	377.99	1892.98	0.61
Annual Average Pounds/ Year	**6689.463**	**2904.137**	**13541.97**	**4.636833**
Tons/ Year	**3.344732**	**1.452068**	**6.770986**	**0.002318**

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Table 4. Fugitive 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 9105
Gas - controlled				0.0147					lb/day-clp	PTO 9105
Gas - Monthly Valves				0.0118					lb/day-clp	PTO 9105
Gas - Monthly Connections				0.0132					lb/day-clp	PTO 9105
Sumps, Tanks & Separators										
Produced	30	ft2		0.019					lb/ft^2-day	PTO 9105
Disposal F	8	ft2		0.019					lb/ft^2-day	PTO 9105
Sump Tan	8	ft2		0.003					lb/ft^2-day	PTO 9105
Sump Dec	48	ft2		0.019					lb/ft^2-day	PTO 9105
Air Flotatic	750	gpm		19.050					lb/MMgal	PTO 9105
Oily Water	50	ft2		0.003					lb/ft^2-day	PTO 9105

Platform Hidalgo
Table 5.0 PM/PM_{10} Emission Factors

Turbine G	*Fuel*	*PM*	*PM_{10}*	*EF*	*Reference*
G-92	PG	2.963	2.963	lbs/MMscf	PTO 9105
G-92	D2	0.007	0.007	lbs/gal	PTO 9105
G-93	PG	2.939	2.939	lbs/MMscf	PTO 9105
G-93	D2	0.007	0.007	lbs/gal	PTO 9105
G-94	PG	2.939	2.939	lbs/MMscf	PTO 9105

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Table 6. Emission Reductions

Description	NOx	ROC	CO	SOx	PM	PM10
			(tons / year)			
Fugitive - Components						
Oil - controlled		0.880				
Gas - controlled		19.161				
Gas - Monthly Valves		1.561				
Gas - Monthly Connections		3.606				
Sumps, Tanks & Separators						
Produced Water Surge Tank		0.104				
Disposal Pile		0.028				
Sump Tank		0.004				
Sump Deck Tank		0.166				
Air Flotation Cell		0.848				
Oily Water Separator		0.027				
Turbine Generators[(1)]						
G-92	14.778	2.765	9.860	0.003	1.323	1.323
G-93	18.545	3.412	11.798	0.004	1.243	1.243
G-94	3.345	1.452	6.771	0.002	0.138	0.138
TOTAL	36.668	7.629	28.429	0.009	2.704	2.704

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Table 7. Emission Reduction Credits[1,2]

Description	NOx	ROC	CO	SOx	PM	PM10
			(tons / year)			
Fugitive - Components						
Oil - controlled		0.704				
Gas - controlled		15.329				
Gas - Monthly Valves		1.249				
Gas - Monthly Connections		2.885				
Sumps, Tanks & Separators						
Produced Water Surge Tank		0.083				
Disposal Pile		0.022				
Sump Tank		0.004				
Sump Deck Tank		0.133				
Air Flotation Cell		0.678				
Oily Water Separator		0.022				
Turbine Generators						
G-92	11.822	2.212	7.888	0.002	0.846	0.846
G-93	14.836	2.730	9.438	0.003	0.795	0.795
G-94	2.676	1.162	5.417	0.002	0.088	0.088
TOTAL	29.334	27.215	22.743	0.007	1.730	1.730

[1] Rule 806 20% Shutdown Discount

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