



**PRELIMINARY  
DECISION OF ISSUANCE NO. 108**

Page 1 of 13

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 Harvest  
ERC Facility Number: 08013
- g. ERC Source:    [ ]    ATC Permit Required. ATC Number:  
                      [x]    PTO Canceled. PTO Number: PT-70/Reeval 9103-R5  
                      [x]    PTO Modification Required: PT-70/Reeval 9103-R5  
                      [ ]    Exempt:
- h. ERC Source Type: Stationary

II. BACKGROUND

This Decision of Issuance (DOI) is for the creation of NO<sub>x</sub>, ROC, CO, SO<sub>x</sub>, PM and PM<sub>10</sub> Emission Reduction Credits (ERCs) associated with the shutdown of various emission sources on Platform Harvest. These include turbine compressors, turbine generators, skim piles, a floatation cell and fugitive emitting components. This equipment is currently permitted on PT-70/Reeval 9103-R5 and was in place and operating for the entire baseline period.

Preliminary  
Decision of Issuance No. 108

Page 2 of 13

III. EMISSION REDUCTION CREDIT QUALIFICATION

a. Total ERCs Approved:

NO<sub>x</sub> = 41.810 tpy  
ROC = 58.784 tpy  
CO = 34.300 tpy  
SO<sub>x</sub> = 0.016 tpy  
PM<sub>10</sub> = 2.138 tpy  
PM = 2.138 tpy

b. Number of Emission Elements: 5

c. Emission Element Data:

c.1 Emission Element Name: Turbine Compressors

- EE/DOI Number: 01/108

- Emission Element Description: Three natural gas compressors powered by three 3.584 MW Allison 501-KC-5 natural gas fired turbines. The turbines are equipped with water injection and selective catalytic reduction using ammonia injection to provide control of NO<sub>x</sub> emissions.

- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. These units operated continuously during the baseline period. Emissions for these units are based on a Continuous Monitoring System (CEMS) for NO<sub>x</sub> emissions, a source tested lb/hr emission factor for ROC and an algorithm for CO developed from source test data (Ref: PT-70/Reeval 9103-R5). Emissions are calculated from NO<sub>x</sub> ppmv data and fuel use data. SO<sub>x</sub> emissions are based on mass balance and PM and PM<sub>10</sub> are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93) and reported fuel use. PM and PM<sub>10</sub> emissions are adjusted with a technical uncertainty factor. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used?  Yes  No

A technical uncertainty factor of 20 percent is applied to PM and PM<sub>10</sub> emissions since there are no measured PM and PM<sub>10</sub> emission factors.

- ERC Due To:  Platform Shutdown

Preliminary  
Decision of Issuance No. 108

Page 3 of 13

- For Shutdowns/Reduction in Throughput:

- BACT Discounted  
 20 Percent Minimum Discount

- RACT/SIP Discounted  Yes  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 (as well as ammonia injection w/SCR), 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  No

- ERC Termination Date: None.

- Emission Element 1/108 Total Approved ERCs:

NO<sub>x</sub> = 1.357 tpy  
ROC = 0.534 tpy  
CO = 11.487 tpy  
SO<sub>x</sub> = 0.006 tpy  
PM<sub>10</sub> = 0.232 tpy  
PM = 0.232 tpy

- Are There Emission Element-Specific Conditions?  Yes  No

- (1) Decommissioning of the Turbines. The owner (PAPCO) and the operator (FMOG) 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 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 them 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,

Preliminary  
Decision of Issuance No. 108

Page 4 of 13

sold, or transferred to the State of California. A copy of the notification shall be provided to the District.

- Attachments  Yes  No

Attachment A (*ERC Calculations*)

c.2 Emission Element Name: Turbine Generators

- EE/DOI Number: 02/108

- Emission Element Description: Five Allison 501-KB5 gas/diesel fired turbines, each powering a 3.695 MW electrical generator. The gas/diesel turbines are equipped with water injection to provide control of NO<sub>x</sub> emissions.

- ERC Baseline: The three-year emissions baseline is from June 2012 through May 2015. These units operated continuously during the baseline period. NO<sub>x</sub>, ROC, and CO emissions for these units are based on predictive algorithms developed from source test data (Ref: PT-70/Reeval 9103-R5). Emissions are calculated based on these algorithms and reported fuel use. SO<sub>x</sub> emissions are based on mass balance and PM and PM<sub>10</sub> emissions are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93) and reported fuel use. PM and PM<sub>10</sub> emissions are adjusted with a technical uncertainty factor. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used?  Yes  No

A technical uncertainty factor of 20 percent is applied to PM and PM<sub>10</sub> emissions since there are no measured PM and PM<sub>10</sub> emission factors.

- ERC Due To:  Platform Shutdown

- For Shutdowns/Reduction in Throughput:

BACT Discounted  
 20 Percent Minimum Discount

- RACT/SIP Discounted  Yes  No

- RACT/SIP Applicable Rules: The District does not have a rule pertaining to gas/diesel turbines, however, the subject turbines are equipped with add-on 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 these 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

Preliminary  
Decision of Issuance No. 108

Page 5 of 13

been installed on these units the District would have adopted a RACT rule requiring it due to our nonattainment status.

- Special ERC Restrictions?       Yes     No

- ERC Termination Date: None.

- Emission Element 2/108 Total Approved ERCs:

NO<sub>x</sub>    =    40.453 tpy  
ROC     =    2.736 tpy  
CO      =    22.813 tpy  
SO<sub>x</sub>    =    0.100 tpy  
PM<sub>10</sub>   =    1.906 tpy  
PM      =    1.906 tpy

- Are There Emission Element-Specific Conditions?       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     Yes     No

Attachment A (*ERC Calculations*)

c.3 Emission Element Name: Fugitive Hydrocarbon Components

- EE/DOI Number: 03/108

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

Preliminary  
Decision of Issuance No. 108

Page 6 of 13

- 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 Harvest and listed in PTO 9103-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             No
- Technical Uncertainty Factor Description: n/a
- ERC Due To:     Platform Shutdown
- For Shutdowns/Reduction in Throughput: Platform Shutdown  
 BACT Discounted  
 20 Percent Minimum Discount
- RACT/SIP Discounted:     Yes     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?             Yes     No  

Fugitive ERCs are subject to restrictions. See conditions below.
- ERC Termination Date: None.
- Emission Element 3/108 Total Approved ERCs:  

ROC = 51.064 tpy
- Attachments     Yes     No  

Attachment A (*ERC Calculations*)
- Are There Emission Element-Specific Conditions?             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

Preliminary  
Decision of Issuance No. 108

Page 7 of 13

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.4 Emission Element Name: Skim Piles

- EE/DOI Number: 04/108

- Emission Element Description: Two skim piles are components of the platform wastewater treatment system. The skim piles are uncovered basins that emit ROC emissions. These units are utilized to treat wastewater that is then pumped to the floatation cell.

- 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<sup>2</sup>-day emission factor. These units operated continuously throughout the baseline period. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used?                     Yes         No

- ERC Due To:     Platform Shutdown

- For Shutdowns/Reduction in Throughput:

BACT Discounted  
       20 Percent Minimum Discount

- RACT/SIP Discounted     Yes     No

Preliminary  
Decision of Issuance No. 108

Page 8 of 13

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

- Special ERC Restrictions?       Yes     No

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

- ERC Termination Date: None.

- Emission Element 4/108 Total Approved ERCs:

ROC = 0.048 tpy

- Are There Emission Element-Specific Conditions?       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 Skim Piles: The owner/operator shall permanently remove the skim piles 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 skim piles are disconnected from active service and drained of all hydrocarbons.)

- Attachments     Yes     No

Attachment A (*ERC Calculations*)

c.5 Emission Element Name: Flootation Cell

- EE/DOI Number: 05/108



Preliminary  
Decision of Issuance No. 108

Page 9 of 13

- Emission Element Description: The floatation cell is a separator utilized in the platform waste water system.

- ERC Baseline: The three-year emissions baseline runs from June 2012 through May 2015. ERCs are based on fluid throughput and a lb/MMgal emission factor. This unit operated continuously throughout the baseline period. See *Evaluation Criteria Summary* below for further detail.

- Technical Uncertainty Factor Used?  Yes  No

- ERC Due To:  Platform Shutdown

- For Shutdowns/Reduction in Throughput:

BACT Discounted  
 20 Percent Minimum Discount

- RACT/SIP Discounted  Yes  No

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

- Special ERC Restrictions?  Yes  No

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

- ERC Termination Date: None.

- Emission Element 5/108 Total Approved ERCs:

ROC = 3.071 tpy

- Are There Emission Element-Specific Conditions?  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

Preliminary  
Decision of Issuance No. 108

Page 10 of 13

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 Flootation Cell: The owner/operator shall permanently remove the flootation 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 flootation cell is disconnected from active service and drained of all hydrocarbons.)

- Attachments [x] Yes [ ] No

Attachment A (*ERC Calculations*)

c.6 Decision of Issuance 108 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 108 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

Preliminary  
Decision of Issuance No. 108

Page 11 of 13

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 platform(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 Compressors. 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.

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.

Skim Piles. The skim piles are subject District Rule 325 and have been operating in compliance with this rule. Any further reductions of emissions are considered surplus.

Floatation Cell. The Floatation Cell 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<sub>x</sub>, 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 fuel use 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 for Platform Harvest and

Preliminary  
Decision of Issuance No. 108

Page 12 of 13

constitute the basis of the ERCs. SO<sub>x</sub> emissions are based on mass balance and PM and PM<sub>10</sub> emissions are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93). A technical uncertainty factor of 20 percent is applied to PM and PM<sub>10</sub> emissions since there are no measured PM or PM<sub>10</sub> emission factors. These ERCs are considered quantifiable.

Turbine Compressors. CEMs equipment monitors the parameters necessary to generate actual NO<sub>x</sub> emission rates. CO emissions are based on a predictive algorithm developed from source test data. The algorithm consists of multiple constants and requires actual fuel flow rates to generate emissions. ROC emissions are based on a lb/hr emission rate developed by source testing. 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. The 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 for Platform Harvest and constitute the basis of these ERCs. SO<sub>x</sub> emissions are based on mass balance and PM and PM<sub>10</sub> emissions are based on emission factors from USEPA AP-42, Table 3.1-1 (7/93). A technical uncertainty factor of 20 percent is applied to PM and PM<sub>10</sub> emissions since there are no measured PM or PM<sub>10</sub> emission factors. These ERCs are considered quantifiable.

Fugitive Hydrocarbon Emissions. The component leakpath counts were verified by reviewing the facility I&M inventory that is subject to Rule 331 inspections and permitted in PTO 9103-R3/R4 during the baseline period. The component leakpath method (District P&P 6100.061) is used to calculate fugitive emissions from Platform Harvest 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 and 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.

Skim Piles. Emissions from the skim piles are based on lb/ft<sup>2</sup>-day emission factors established in PTO 9103-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 Report. 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.

Floatation Cell. Emissions from the floatation cell are based on a lb/MMgal emission factors established in PTO 9103-R5 and reported throughput. The owner/operator was

Preliminary  
Decision of Issuance No. 108

Page 13 of 13

required to report throughput which is 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 Report. The operating days for the baseline period are reproduced in Table 2 and emission factor is 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 photo documentation as well as cancellation or modification of all operating permits to verify the permanent removal of the subject equipment. The ERCs are considered permanent.

*Enforceable.* PTO 9103-R4 will be cancelled or modified prior to the issuance of the ERC Certificate. The ERCs are considered enforceable.

- e. Recommendation: Based on the ERC application and the attachment contained within the 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 Harvest DOI 108  
 Table 1. Operating Equipment

APCD Device No.	Description	Manufacturer	Model	Size	Units	Operator ID
<b>FUGITIVES</b>						
5388	Oil - controlled					
5389	Gas - controlled					
<b>SUMPS/TANKS/SEPARATORS</b>						
5394	Skim Pile	n/a	n/a	12.6	ft <sup>2</sup>	T-303
5395	Skim Pile	n/a	n/a	12.6	ft <sup>3</sup>	T-801
5397	Floation Cell	U.S. Filter	Q-160	2.1	Mmgal/day	332-U-305
<b>TURBINE GENERATORS</b>						
5013	Turbine Generator A	Allison	501-KB5	3.58	megawatts	333-G-700-A
5014	Turbine Generator B	Allison	501-KB5	3.58	megawatts	333-G-700-B
5015	Turbine Generator C	Allison	501-KB5	3.58	megawatts	333-G-700-C
5016	Turbine Generator D	Allison	501-KB5	3.58	megawatts	333-G-700-D
5017	Turbine Generator E	Allison	501-KB5	3.58	megawatts	333-G-700-E
<b>TURBINE COMPRESSORS</b>						
5021	Turbine Compressor A	Allison	501-KC-5	3.58	megawatts	336-K-200-A
5022	Turbine Compressor B	Allison	501-KC-5	3.58	megawatts	336-K-200-B
5023	Turbine Compressor C	Allison	501-KC-5	3.58	megawatts	336-K-200-C

**Platform Harvest DOI 108**  
**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
<b>Fugitive Components</b>														
Oil - Controlled	5388	avg. clp	5109	5109	5109	5109	5109	5109	5109	11656	11656	11656	11656	11656
Gas - Controlled	5389	avg. clp	12361	12361	12361	12361	12361	12361	12361	26516	26516	26516	26516	26516
<b>Sumps/Tanks/Separators</b>														
Skim Pile	5394	Day	30	31	31	30	31	30	31	31	28	31	30	31
Skim Pile	5395	Day	30	31	31	30	31	30	31	31	28	31	30	31
Air Flotation Cell	5397	MMgal	40.25	42.51	42.24	34.31	32.60	22.08	27.89	37.38	22.04	38.62	35.91	38.90
<b>Turbine Generators</b>														
300-G-700-A	5013	MMscf	18.4	16.5	13.9	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Gallons	42.0	1074	33708	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-G-700-B	5014	MMscf	0.0	0.0	0.0	0.0	0.0	3.3	2.9	4.3	0.8	0.0	1.9	2.4
		Gallons	0	0	0	114	0	1104	5844	11802	37326	942	8706	432
300-G-700-C	5015	MMscf	3.6	7.4	21.6	15.6	17.6	6.9	10.0	9.4	7.2	9.5	17.3	9.1
		Gallons	121524	99690	2184	40830	23880	46818	59388	5214	1908	0	120	1932
300-G-700-D	5016	MMscf	0.0	0.0	0.0	1.3	1.9	8.3	7.5	6.4	4.7	11.4	3.8	11.4
		Gallons	0	0	0	9600	54060	7464	19914	18294	46980	4158	11532	12858
300-G-700-E	5017	MMscf	1.5	1.5	0.0	2.6	4.8	0.0	0.0	0.7	0.5	14.9	15.3	18.9
		Gallons	13200	38850	29796	66324	75510	126570	58434	149118	70134	47694	708	3258
<b>Turbine Compressors</b>														
336-K-200-A	5021	MMscf	25.0	24.0	29.0	10.4	2.9	21.0	14.4	30.7	16.4	23.8	7.9	28.1
336-K-200-B	5022	MMscf	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
336-K-200-C	5023	MMscf	3.6	6.0	0.0	11.7	2.4	7.6	14.9	0.0	0.0	4.4	17.4	2.3

**Platform Harvest DOI 108**  
**Table 2. Operating Data (cont.)**

Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14
<b>Fugitive Components</b>											
11656	11656	11656	11656	11656	11656	11656	11656	11656	11656	11656	11656
26516	26516	26516	26516	26516	26516	26516	26516	26516	26516	26516	26516
<b>Sumps/Tanks/Separators</b>											
30	31	31	30	31	30	31	31	28	31	30	31
30	31	31	30	31	30	31	31	28	31	30	31
38.91	43.01	45.79	42.32	41.74	38.98	41.54	42.05	34.60	26.61	36.63	44.87
<b>Turbine Generators</b>											
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.6	9.3	6.4	4.7	0.0	0.0	2.0	0.0	0.0	0.0	0.2	0.0
18	6	0	0	0	0	0	6	0	16	0	0
20.5	14.8	23.0	20.9	18.9	7.9	12.5	10.8	6.9	4.7	15.2	16.5
390	3954	1680	6666	12	8322	0	0	112	460	236	172
0.5	9.8	5.1	13.0	13.5	10.9	9.7	0.0	11.3	12.2	10.2	20.2
2994	4944	414	168	198	600	0	0	5549	6291	144	0
22.0	10.0	11.1	2.5	10.0	20.1	20.6	18.8	18.5	16.2	12.1	5.5
84	9048	888	4284	468	2496	0	0	5377	26849	15434	0
<b>Turbine Compressors</b>											
29.3	27.4	21.6	13.3	12.6	12.6	2.9	0.0	0.0	0.0	0.0	0.0
0.0	0.0	6.9	3.9	10.6	14.5	11.7	17.3	15.2	14.6	15.6	23.6
0.1	13.3	14.6	24.6	6.2	0.0	14.2	11.7	6.9	0.9	10.9	5.7



Platform Harvest DOI 108  
 Table 2. Operating Data (cont.)

Annual  
 Average

Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	6/2012 - 5/2015	Units
<b>Fugitive Components</b>													
11656	11656	11656	11656	11656	11656	11656	11656	11656	11656	11656	11656	10383	avg. clp
26516	26516	26516	26516	26516	26516	26516	26516	26516	26516	26516	26516	23764	avg. clp
<b>Sumps/Tanks/Separators</b>													
30	31	31	30	31	30	31	31	28	31	30	31	365	Day
30	31	31	30	31	30	31	31	28	31	30	31	365	Day
41.49	43.62	35.00	27.28	36.36	29.55	17.11	39.25	38.85	8.81	0	0	403	MMgal
<b>Turbine Generators</b>													
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18	MMscf
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11608	Gallons
0.0	0.0	6.0	0.0	0.1	0.0	0.0	2.2	0.0	14.0	3.4	2.6	23	MMscf
9	0	0	1	0	0	0	463	0	0	0	0	22263	Gallons
12.9	6.4	7.4	16.7	1.1	19.0	12.9	20.5	15.3	4.7	11.2	14.3	150	MMscf
257	0	11229	589	2832	3169	0	962	11	460	457	0	148486	Gallons
12.0	15.0	6.1	2.3	17.8	16.9	12.7	7.3	4.7	5.0	8.0	7.0	96	MMscf
2146	0	2707	11	9271	11168	26438	3443	0	1	271	148	87255	Gallons
14.7	20.5	17.4	19.2	17.2	1.0	1.2	13.8	21.3	24.1	20.5	11.7	137	MMscf
931	0	11416	5246	14653	640	30138	1654	0.0	0.0	2942.4	14.7	270720	Gallons
<b>Turbine Compressors</b>													
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	118	MMscf
15.3	27.9	22.6	12.2	21.6	15.0	7.3	23.4	24.6	27.0	23.8	12.2	122	MMscf
11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64	MMscf

Platform Harvest DOI 108  
 Table 3. Baseline Monthly Emissions  
 Turbine Generators and Turbine Compressors

G-700A-G	NOx	ROC	CO	SOx
Jun-12	3547.700	138.200	1483.700	0.658
Jul-12	3170.500	134.500	1423.900	0.570
Aug-12	3576.100	139.500	2113.000	0.770
Sep-12	932.100	35.600	374.900	0.190
Oct-12	0.000	0.000	0.000	0.000
Nov-12	0.000	0.000	0.000	0.000
Dec-12	0.000	0.000	0.000	0.000
Jan-13	0.000	0.000	0.000	0.000
Feb-13	0.000	0.000	0.000	0.000
Mar-13	0.000	0.000	0.000	0.000
Apr-13	0.000	0.000	0.000	0.000
May-13	0.000	0.000	0.000	0.000
Jun-13	0.000	0.000	0.000	0.000
Jul-13	0.000	0.000	0.000	0.000
Aug-13	0.000	0.000	0.000	0.000
Sep-13	0.000	0.000	0.000	0.000
Oct-13	0.000	0.000	0.000	0.000
Nov-13	0.000	0.000	0.000	0.000
Dec-13	0.000	0.000	0.000	0.000
Jan-14	0.000	0.000	0.000	0.000
Feb-14	0.000	0.000	0.000	0.000
Mar-14	0.000	0.000	0.000	0.000
Apr-14	0.000	0.000	0.000	0.000
May-14	0.000	0.000	0.000	0.000
Jun-14	0.000	0.000	0.000	0.000
Jul-14	0.000	0.000	0.000	0.000
Aug-14	0.000	0.000	0.000	0.000
Sep-14	0.000	0.000	0.000	0.000
Oct-14	0.000	0.000	0.000	0.000
Nov-14	0.000	0.000	0.000	0.000
Dec-14	0.000	0.000	0.000	0.000
Jan-15	0.000	0.000	0.000	0.000
Feb-15	0.000	0.000	0.000	0.000
Mar-15	0.000	0.000	0.000	0.000
Apr-15	0.000	0.000	0.000	0.000
May-15	0.000	0.000	0.000	0.000
<b>Annual Average</b> Pounds/ Year	<b>3742.13</b>	<b>149.27</b>	<b>1799.50</b>	<b>0.73</b>
<b>Tons/ Year</b>	<b>1.87</b>	<b>0.07</b>	<b>0.90</b>	<b>0.00</b>

G-700B-G	NOx	ROC	CO	SOx
Jun-12	0.000	0.000	0.000	0.000
Jul-12	0.000	0.000	0.000	0.000
Aug-12	0.000	0.000	0.000	0.000
Sep-12	7.600	2.600	12.900	0.002
Oct-12	0.000	0.000	0.000	0.000
Nov-12	671.100	98.870	368.600	0.174
Dec-12	702.400	76.700	533.450	0.180
Jan-13	1169.940	151.130	932.190	0.300
Feb-13	1089.270	310.830	1981.930	0.349
Mar-13	30.530	13.010	63.610	0.010
Apr-13	615.890	136.000	663.300	0.154
May-13	539.050	48.080	209.280	0.100
Jun-13	1.180	1.570	2.100	0.000
Jul-13	2009.580	65.910	633.780	0.350
Aug-13	1369.530	45.990	438.750	0.230
Sep-13	1028.800	32.180	314.600	0.220
Oct-13	0.000	0.000	0.000	0.000
Nov-13	0.000	0.000	0.000	0.000
Dec-13	0.450	0.030	104.000	0.000
Jan-14	2.100	0.140	2.200	0.001
Feb-14	105.300	3.850	38.050	0.033
Mar-14	9.400	2.170	6.490	0.002
Apr-14	34.500	1.490	17.010	0.009
May-14	0.100	0.000	0.120	0.000
Jun-14	6.100	1.100	7.730	0.002
Jul-14	5.700	0.300	3.650	0.000
Aug-14	1210.600	45.270	433.000	0.330
Sep-14	3.600	0.420	4.040	0.000
Oct-14	25.000	0.990	10.910	0.010
Nov-14	0.000	0.000	0.000	0.000
Dec-14	7.000	0.470	6.990	0.000
Jan-15	468.800	18.400	175.420	0.100
Feb-15	0.000	0.000	0.000	0.000
Mar-15	2923.100	101.540	971.500	0.620
Apr-15	687.400	25.720	249.620	0.095
May-15	522.200	19.560	188.580	0.060
<b>Annual Average</b> Pounds/ Year	<b>5082.07</b>	<b>401.44</b>	<b>2791.27</b>	<b>1.11</b>
<b>Tons/ Year</b>	<b>2.54</b>	<b>0.20</b>	<b>1.40</b>	<b>0.00</b>

G-700C-G	NOx	ROC	CO	SOx
Jun-12	3737.600	697.300	5968.600	1.162
Jul-12	4027.500	355.200	4481.600	1.100
Aug-12	4543.500	151.000	1607.200	0.790
Sep-12	4134.300	232.300	2685.600	0.974
Oct-12	4132.900	128.700	1819.000	1.040
Nov-12	2525.400	133.270	1924.800	0.702
Dec-12	3452.200	170.790	2773.940	0.950
Jan-13	2033.500	91.050	860.210	0.490
Feb-13	1544.580	63.240	578.940	0.349
Mar-13	1940.400	72.410	687.360	0.360
Apr-13	3573.440	131.540	1234.300	0.679
May-13	1924.000	83.950	733.280	0.280
Jun-13	4271.610	151.520	1452.500	0.881
Jul-13	3344.240	126.030	1118.360	0.670
Aug-13	4989.800	191.740	1668.210	1.040
Sep-13	4689.390	245.670	1835.700	1.042
Oct-13	3821.330	144.150	1365.560	0.830
Nov-13	1866.070	261.960	1142.500	0.541
Dec-13	2512.900	95.510	909.980	0.620
Jan-14	2202.300	81.700	778.140	0.526
Feb-14	1431.490	52.280	493.700	0.326
Mar-14	974.900	40.400	369.720	0.225
Apr-14	3157.080	117.460	1080.100	0.748
May-14	3385.450	125.210	1175.310	0.810
Jun-14	2648.600	102.870	938.460	0.678
Jul-14	1317.510	47.450	452.360	0.350
Aug-14	1860.460	464.890	1412.340	0.510
Sep-14	3432.650	143.000	1253.610	0.820
Oct-14	297.420	50.010	257.830	0.070
Nov-14	3992.080	172.210	1529.080	1.000
Dec-14	2706.580	95.530	936.310	0.590
Jan-15	4336.790	158.160	1482.420	1.150
Feb-15	3227.290	111.180	1054.440	0.680
Mar-15	974.880	40.370	369.720	0.220
Apr-15	2391.840	89.140	800.970	0.490
May-15	3018.380	102.380	982.190	0.300
<b>Annual Average</b> Pounds/ Year	<b>34806.79</b>	<b>1840.52</b>	<b>16738.11</b>	<b>7.99</b>
<b>Tons/ Year</b>	<b>17.40</b>	<b>0.92</b>	<b>8.37</b>	<b>0.00</b>

G-700D-G	NOx	ROC	CO	SOx
Jun-12	0.000	0.000	0.000	0.000
Jul-12	0.000	0.000	0.000	0.000
Aug-12	0.000	0.000	0.000	0.000
Sep-12	493.400	68.700	578.300	0.139
Oct-12	1710.200	382.200	2790.400	0.550
Nov-12	1715.400	155.800	1196.300	0.450
Dec-12	1882.200	205.170	1695.590	0.410
Jan-13	1674.260	191.480	1438.990	0.450
Feb-13	2048.020	326.470	2675.870	0.594
Mar-13	2304.590	224.060	1227.650	0.460
Apr-13	1039.600	160.970	948.700	0.246
May-13	2323.550	233.280	1549.530	0.540
Jun-13	176.940	31.400	201.300	0.046
Jul-13	2112.770	181.500	1057.710	0.520
Aug-13	1052.050	46.380	397.680	0.270
Sep-13	2595.600	105.410	980.700	0.617
Oct-13	2578.870	115.900	1106.400	0.550
Nov-13	2118.940	97.980	894.300	0.482
Dec-13	1882.940	79.140	767.780	0.480
Jan-14	2572.640	107.910	1046.770	0.687
Feb-14	2375.240	156.880	1187.350	0.629
Mar-14	2565.650	183.910	1289.350	0.664
Apr-14	1969.820	88.640	821.260	0.525
May-14	3935.710	161.730	1561.340	0.990
Jun-14	2370.730	118.010	1064.650	0.652
Jul-14	2911.690	120.030	1160.510	0.860
Aug-14	1241.890	112.020	678.940	0.330
Sep-14	443.240	18.930	177.850	0.140
Oct-14	3754.370	355.880	1983.920	1.110
Nov-14	3562.590	294.510	2007.710	0.960
Dec-14	3218.500	436.630	2517.400	0.800
Jan-15	1529.200	115.800	773.110	0.380
Feb-15	913.330	37.870	366.500	0.200
Mar-15	991.700	38.960	378.790	0.200
Apr-15	1547.150	69.140	652.980	0.273
May-15	1371.400	58.040	545.070	0.130
<b>Annual Average</b> Pounds/ Year	<b>21661.39</b>	<b>1693.58</b>	<b>12573.57</b>	<b>5.44</b>
<b>Tons/ Year</b>	<b>10.83</b>	<b>0.85</b>	<b>6.29</b>	<b>0.00</b>

Platform Harvest DOI 108

Table 3: Baseline Monthly Emissions (cont.)  
Turbine Generators and Turbine Compressors

G-700E-G	NOx	ROC	CO	SOx
Jun-12	641.900	81.800	721.300	0.165
Jul-12	1318.1	135.5	1679.1	0.39
Aug-12	742.6	127.7	1279.20	0.25
Sep-12	2180.00	243.60	2860.60	0.6667
Oct-12	2913.6	224.8	3202.6	0.89
Nov-12	3141.5	702.97	5960.50	1.0749
Dec-12	2336.50	444.00	4250.09	0.79
Jan-13	3845.2	713.1	6703.7	1.22
Feb-13	1851.31	546.42	3599.47	0.6139
Mar-13	4355.70	455.54	3366.55	0.96
Apr-13	3264.9	121.0	1091.0	0.6007
May-13	4117.52	205	1556.93	0.75
Jun-13	4720.40	158.33	1514.80	0.9373
Jul-13	2448.1	195.0	1201.3	0.56
Aug-13	2405.1	95.9	819.72	0.53
Sep-13	657.92	95.77	435.60	0.1498
Oct-13	2098.7	81.8	722.7	0.46
Nov-13	4249.58	179.01	1560.80	1.0301
Dec-13	4227.23	153.57	1457.96	1
Jan-14	3883.6	138.2	1318.5	0.9471
Feb-14	3976.88	223.48	1647.97	0.9659
Mar-14	3881.90	398.27	2694.51	1.0283
Apr-14	2786.6	197.1	1673.9	0.7272
May-14	1100.6	43.98	435.02	0.28
Jun-14	2885.35	129.03	1195.12	0.8268
Jul-14	4055.6	160.3	1536.6	1.16
Aug-14	3792.49	464.32	2144.81	1.02
Sep-14	3904.88	207.95	1777.14	0.99
Oct-14	3855.3	321.3	2110.5	1.14
Nov-14	238.78	20.24	129.41	0.07
Dec-14	991.53	260.71	1671.63	0.32
Jan-15	3069.0	119.4	1059.2	0.83
Feb-15	4656.7	147.8	1437.5	0.94
Mar-15	5364.4	163.7	1614.7	1.03
Apr-15	4582.4	165.1	1533.9	0.78
May-15	2978.0	143.2	1432.1	0.41
<b>Annual Average</b>				
Pounds/ Year	35840.00	2754.90	23132.17	8.83
Tons/ Year	17.92	1.38	11.57	0.00

K-200-A	NOx	ROC	CO	SOx
Jun-12	263.60	100.70	2276.30	0.89
Jul-12	269.50	96.44	2192.20	0.82
Aug-12	250.50	118.78	2652.40	1.03
Sep-12	100.20	42.30	945.40	0.41
Oct-12	28.30	12.00	267.10	0.14
Nov-12	216.00	86.70	1935.70	0.99
Dec-12	162.70	59.19	1317.00	0.53
Jan-13	300.70	124.61	2802.30	1.42
Feb-13	173.10	66.20	1495.50	0.67
Mar-13	264.30	95.49	2162.70	0.87
Apr-13	69.60	31.70	720.40	0.32
May-13	257.90	112.45	2563.60	1.09
Jun-13	238.10	119.40	2678.80	1.25
Jul-13	241.00	106.42	2389.40	1.15
Aug-13	177.00	87.60	1714.80	0.88
Sep-13	122.90	55.10	1219.30	0.62
Oct-13	116.20	53.36	1153.10	0.49
Nov-13	101.80	51.10	1148.70	0.74
Dec-13	23.80	12.02	267.00	0.14
Jan-14	0.00	0.00	0.00	0.00
Feb-14	0.00	0.00	0.00	0.00
Mar-14	0.00	0.00	0.00	0.00
Apr-14	0.00	0.00	0.00	0.00
May-14	0.00	0.00	0.00	0.00
Jun-14	0.00	0.00	0.00	0.00
Jul-14	0.00	0.00	0.00	0.00
Aug-14	0.00	0.00	0.00	0.00
Sep-14	0.00	0.00	0.00	0.00
Oct-14	0.00	0.00	0.00	0.00
Nov-14	0.00	0.00	0.00	0.00
Dec-14	0.00	0.00	0.00	0.00
Jan-15	0.00	0.00	0.00	0.00
Feb-15	0.00	0.00	0.00	0.00
Mar-15	0.00	0.00	0.00	0.00
Apr-15	0.00	0.00	0.00	0.00
May-15	0.00	0.00	0.00	0.00
<b>Annual Average</b>				
Pounds/ Year	1125.73	477.19	10633.90	4.82
Tons/ Year	0.56	0.24	5.32	0.00

K-200-B	NOx	ROC	CO	SOx
Jun-12	1.40	1.20	25.00	0.01
Jul-12	0.00	0.00	0.00	0.00
Aug-12	0.00	0.00	0.00	0.00
Sep-12	0.00	0.00	0.00	0.00
Oct-12	0.00	0.00	0.00	0.00
Nov-12	0.00	0.00	0.00	0.00
Dec-12	0.00	0.00	0.00	0.00
Jan-13	0.00	0.00	0.00	0.00
Feb-13	0.00	0.00	0.00	0.00
Mar-13	0.00	0.00	0.00	0.00
Apr-13	0.00	0.00	0.00	0.00
May-13	0.00	0.00	0.00	0.00
Jun-13	0.00	0.00	0.00	0.00
Jul-13	0.00	0.00	0.00	0.00
Aug-13	55.20	29.51	638.30	0.36
Sep-13	40.10	16.80	364.60	0.21
Oct-13	81.60	45.64	983.70	0.50
Nov-13	159.00	62.80	1352.60	0.62
Dec-13	151.60	52.11	1101.50	0.57
Jan-14	209.73	76.68	1621.19	0.86
Feb-14	162.09	66.34	1422.29	0.79
Mar-14	158.27	63.50	1361.51	0.80
Apr-14	196.16	65.86	1438.85	0.77
May-14	267.68	101.41	2195.50	1.17
Jun-14	181.30	68.32	1438.67	0.89
Jul-14	299.52	125.73	2633.27	1.58
Aug-14	242.05	103.82	2144.82	1.20
Sep-14	115.05	57.57	1148.89	0.75
Oct-14	429.67	98.17	2042.01	1.28
Nov-14	165.59	72.01	1447.97	0.83
Dec-14	73.84	36.14	713.70	0.35
Jan-15	253.74	107.81	2229.20	1.24
Feb-15	280.66	113.57	2337.69	1.08
Mar-15	315.94	125.29	2572.05	1.16
Apr-15	264.24	108.84	2255.20	0.89
May-15	164.49	67.66	1376.69	0.29
<b>Annual Average</b>				
Pounds/ Year	1422.97	555.59	11615.07	6.07
Tons/ Year	0.71	0.28	5.81	0.00

K-200-C	NOx	ROC	CO	SOx
Jun-12	25.70	15.70	339.60	0.13
Jul-12	61.20	25.82	559.90	0.20
Aug-12	10.50	4.75	100.20	0.04
Sep-12	160.30	51.70	1106.40	0.48
Oct-12	326.50	101.89	2176.30	1.07
Nov-12	79.70	33.40	709.00	0.34
Dec-12	98.10	65.37	1395.90	0.62
Jan-13	0.40	0.13	1.10	0.00
Feb-13	1.00	0.30	4.80	1.57
Mar-13	30.00	19.18	410.50	0.17
Apr-13	141.90	73.20	1602.80	0.67
May-13	16.00	7.45	164.50	0.07
Jun-13	2.30	0.60	12.00	3.42
Jul-13	96.70	53.29	1135.90	0.60
Aug-13	108.50	63.41	1143.80	0.64
Sep-13	200.60	106.10	2291.60	1.17
Oct-13	569.60	26.81	569.60	0.27
Nov-13	0.30	0.00	0.70	0.00
Dec-13	136.80	62.39	1331.20	0.71
Jan-14	120.41	50.13	1088.06	0.60
Feb-14	72.55	28.68	634.76	0.32
Mar-14	13.69	3.49	79.03	0.04
Apr-14	88.22	42.84	983.18	0.55
May-14	50.31	23.98	523.13	0.27
Jun-14	115.52	47.00	1029.29	0.55
Jul-14	0.00	0.00	0.00	0.00
Aug-14	1.82	0.05	0.55	0.00
Sep-14	6.19	0.41	5.20	0.00
Oct-14	0.00	0.00	0.00	0.00
Nov-14	0.00	0.00	0.00	0.00
Dec-14	0.00	0.00	0.00	0.00
Jan-15	0.00	0.00	0.00	0.00
Feb-15	0.00	0.00	0.00	0.00
Mar-15	0.00	0.00	0.00	0.00
Apr-15	0.00	0.00	0.00	0.00
May-15	0.00	0.00	0.00	0.00
<b>Annual Average</b>				
Pounds/ Year	844.94	302.69	6466.33	4.83
Tons/ Year	0.42	0.15	3.23	0.00

Platform Harvest DOI 108

Table 4. Fugitive Emission Factors

Description	Device Specifications		NOx	ROC	CO	SOx	PM	PM10	Units	Reference
<b><i>Fugitive - Components</i></b>										
Oil - controlled				0.0009					lb/day-clp	PTO 9103
Gas - controlled				0.0147					lb/day-clp	PTO 9103
<b><i>Sumps, Tanks &amp; Separators</i></b>										
Skim Pile	13.0	ft <sup>2</sup>		0.0126					lb/ft <sup>2</sup> -day	PTO 9103
Skim Pile	13.0	ft <sup>2</sup>		0.0126					lb/ft <sup>2</sup> -day	PTO 9103
Air Flotation Cell	2.1	MMgal/day		19.0500					lb/MMgal	PTO 9103

**Platform Harvest DOI 108**

**Table 6. Emission Reductions (Undiscounted for Shutdown)**

<i>Description</i>	NOx	ROC	CO	SOx	PM	PM10
	( tons / year )					
<i>Fugitive - Components</i>						
Oil - controlled		1.663				
Gas - controlled		63.830				
<i>Sumps, Tanks &amp; Separators</i>						
Skim Pile		0.030				
Skim Pile		0.030				
Air Flotation Cell		3.839				
<i>Turbine Generators</i>						
300-G-700-A	1.871	0.075	0.899	0.000	0.079	0.079
300-G-700-B	2.541	0.201	1.396	0.001	0.132	0.132
300-G-700-C	17.403	0.920	8.369	0.004	0.878	0.878
300-G-700-D	10.831	0.847	6.287	0.003	0.529	0.529
300-G-700-E	17.920	1.377	11.566	0.004	1.360	1.360
<i>Turbine Compressors</i>						
336-K-200-A	0.563	0.239	5.317	0.002	0.141	0.141
336-K-200-B	0.711	0.278	5.808	0.003	0.146	0.146
336-K-200-C	0.422	0.151	3.233	0.002	0.076	0.076

**Platform Harvest DOI 108**

**Table 7. Emission Reduction Credits <sup>1, 2</sup>**

<i>Description</i>	NOx	ROC	CO	SOx	PM	PM10
	( tons / year )					
<i>Fugitive - Components</i>						
Oil - controlled		1.331				
Gas - controlled		51.064				
<i>Sumps, Tanks &amp; Separators</i>						
Skim Pile		0.024				
Skim Pile		0.024				
Air Flotation Cell		3.071				
<i>Turbine Generators</i>						
300-G-700-A	1.497	0.060	0.719	0.000	0.051	0.051
300-G-700-B	2.033	0.161	1.117	0.000	0.084	0.084
300-G-700-C	13.923	0.736	6.695	0.003	0.562	0.562
300-G-700-D	8.665	0.677	5.029	0.002	0.339	0.339
300-G-700-E	14.336	1.102	9.253	0.004	0.870	0.870
<i>Turbine Compressors</i>						
336-K-200-A	0.450	0.191	4.254	0.002	0.090	0.090
336-K-200-B	0.569	0.222	4.646	0.002	0.093	0.093
336-K-200-C	0.338	0.121	2.587	0.002	0.049	0.049
<b>TOTALS</b>	<b>41.810</b>	<b>58.784</b>	<b>34.300</b>	<b>0.016</b>	<b>2.138</b>	<b>2.138</b>

<sup>1</sup> Rule 806 20% Shutdown Discount

<sup>2</sup> 20% Uncertainty Factor Applied to PM and PM<sub>10</sub>