

US EPA ARCHIVE DOCUMENT



United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Region

Yuma Area Office

7301 Calle Agua Salada

Yuma, AZ 85364

SEP 01 2016

IN REPLY REFER TO:

YAO-7220

ENV-8.10



Ms. Lisa Beckham
Air Division Permits Office (Air-3)
U.S. Environmental Protection
Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Subject: Request for an Air Permit Under the Federal Minor New Source Review Program in Indian Country for the Use of Dredge Booster Pumps

Dear Ms. Beckham:

The Bureau of Reclamation is submitting the enclosed Federal Minor New Source Review application for the use of booster pumps on tribal lands (Quechan) to facilitate the transport of dredged material to an existing upland dredge disposal site. Also enclosed is the Air Emissions Calculation Spreadsheet.

Due to the use of booster pumps, new emission estimates does not change the status from being considered and existing source requiring evaluation under the Federal Minor New Source review program in Indian Country.

If you have any questions or need assistance please contact Mr. Henry Cabrera, Sr., Environmental Protection Specialist, by phone at 928-343-8227 or via e-mail at hcabrera@usbr.gov.

Sincerely,

Julian DeSantiago, Manager
Environmental Planning and Compliance Group

Enclosures - 2

Application Prologue for Federal Minor New Source Review Program in Indian Country August 2016

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Laguna Reservoir Restoration Project

1.0 Introduction: The Bureau of Reclamation (BOR) is currently dredging at the Laguna Reservoir. The reservoir is located along the lower Colorado River, above Laguna Dam. The air permit will allow Reclamation to operate booster pumps on site. The booster pumps will facilitate the transport of dredged material from the dredging areas, Laguna Reservoir, to an existing uplands disposal area.

Scope of Project: Overall, the project proposes to increase the storage capacity behind Laguna Dam in order to capture flows (sluicing flows) released from Imperial Dam. The Laguna Dam Reservoirs storage capacity prior to 1983 was maintain at approximately 1,500 acre feet (af), but flood deposited sediment and reduced the storage capacity to approximately 400 af. Dredging would restore storage capacity from 400 acre-feet to 1,500 acre-feet by removing accumulated sediment and nuisance vegetation along the back of Laguna Dam and in uplands areas adjacent to the open water channel of the Colorado River (Reclamation 2006). All dredged material will be placed in an upland disposal area. The disposal area has been used as a dredged disposal area since the mid-1960's by Reclamation's Yuma Area Office. Figure 1 shows areas to be dredged and the disposal area.

Permits: 404 Permit No. SPL-2005-01553-MB was issued on May 22, 2007, for the Project. However due to funding cuts that impacted Reclamation's dredging program, dredging activities were delayed and the Project was temporally placed on hold. Subsequent 404 permit modifications were issued in 2010, 2013, and 2016. Additionally, since the project is located within states of Arizona, California, and on tribal lands; 401 water quality certifications have been issued by Environmental Protection Agency (EPA), the California Regional Water Quality Control Board, and the Arizona Department of Environmental Quality.

Project Location: The majority of the project area is on federal lands, although some of the project site is located on or adjacent to tribal lands within the Fort Yuma Quechan Reservation boundary, these Reclamation-withdrawn lands are currently used for water storage, delivery, and sediment disposal from maintenance dredging activities. Reclamation continues to hold fee title to the Laguna Dam infrastructure, and Sediment Disposal Area within the Reservation boundaries and maintains the rights to operate, maintain, and reconstruct these appurtenances through existing reservations made in an existing security and protection zone for those purposes. The majority of the project site is located within Reclamation's jurisdiction; however, a portion of the site is located on tribal lands outside Reclamation's security zone. The booster pumps will be placed on tribal lands.

Construction Update: To date approximately 45 percent of the project has been completed. The dredge has been operating four days, two shifts per day. Currently we will operate one booster on Quechan Indian Country land connected to a cutter suction dredger and discharge pipe

2.0 PROCESS DESCRIPTION: Reclamation will use a cutter suction dredger which is a mobile dredger used along the Colorado River's California Sluiceway channel with one booster pump on Quechan Indian Country land, which is connected to the suction pipe and the discharge

pipe. The suction pipe is situated in a well in front of the booster pumps on a cutter suction dredger. This is an Ellicott 860 SL, 800 hp (600 kW) Caterpillar C27 diesel engine; 14-inch x14-inch (350 mm X 356 mm) Ellicott pump; 30 foot (nine-meter) dredging depth; ergonomic electronic controls and automation system; full dredge position monitoring system; remote booster controlled directly from the dredge operator's cab; biodegradable oil; environmentally sound for water, air, and noise pollution

2.1 Project Duration: The booster pump will operate approximately 20 hours per day, 4 days per week for 2 years (January 2017 to January 2019).

2.2 Process Flow:

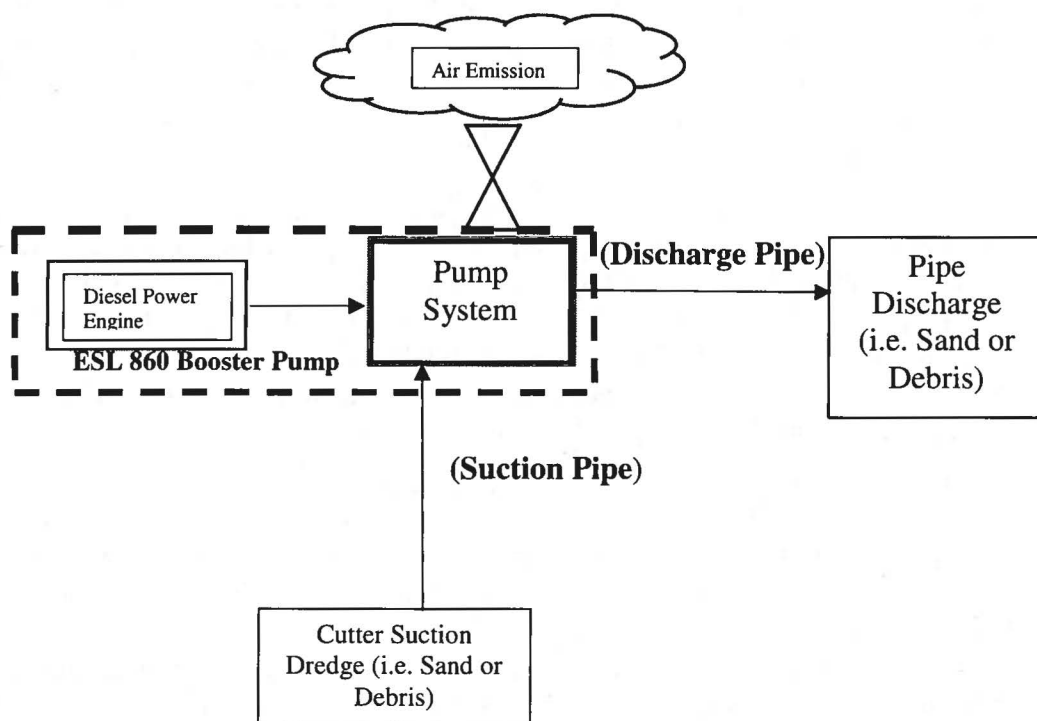


Figure 1 – Process System

The Ellicott 860 Booster Pump is a centrifugal, single suction, volute type pump driven by an 800 HP (597 KW) Diesel Engine. All operational drive components are mounted on a single skid. The slurry pump is equipped with a 14" inch diameter suction clean out and the pump discharge outlet is 14" inch diameter. The speed of the slurry pump is controlled by use of an electrical throttle mounted in the engine control panel or remotely via radio by the dredge operator. Engine to slurry pump speed reduction is accomplished through the use of an electronically controlled hydraulically engaged marine transmission. Power is transmitted from the marine transmission through a flexible shaft driveline.

2.3 Emission Units

Caterpillar Inc. warrants that certified non-road diesel engines. The Ellicott 860 Booster Pump has a diesel engine (597KW) diesel engine. The engine conforms to EPA and California regulations large non-road compression-ignition engines.

2.4 Air Pollution Control Equipment

The ESL 860 Booster Pump has emission related parts for efficiency of emission control and engine performance. The following items are emission related parts and components. Fuel Injection System, Air-Fuel Ratio Control System, Intake Manifold, Turbocharger System Charge Air Cooling System, Crankcase Ventilation System, Exhaust manifold, Electronic Control Module including sensors and Personality Module, and miscellaneous valves, switches, hoses, clamps, connectors, tubing, and sealing devices used in the above systems.

3.0 EMISSION ESTIMATES

The EPA is ensuring that air resources in Indian country will be protected in the manner intended by the Act by establishing a preconstruction permitting program for new or modified minor sources, minor modifications at major sources, and new major sources or major modifications in nonattainment areas. This project requires a minor NSR permit as potential emissions will exceed the minor NSR thresholds in Table 1 to 40 CFR 49.153. Estimates of potential emissions, based on maximum operating rates, and allowable emissions, based on the operating schedule have been calculated for these pollutants: particulate matter, PM10, PM2.5, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H2SO4), hydrogen sulfide (H2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

3.1 Potential Annual Emissions

A facility in Indian country must also calculate potential emissions, or their potential to emit (PTE), to determine what air permit program the source may be subject to. Potential emissions are indicated in Attachment from the use of the pump system using 8,760 hours per year. The PTE can be viewed on Attachment 2 – Air Emission Calculation Spreadsheet.

3.2 Actual Annual Emissions

The Ellicott 860 Booster Pump is a centrifugal, single suction, volute type pump driven by a 800 HP (597 KW) Diesel Engine. It will operate for 20 hours for 4 days per week. The results of the average annual emissions for Emission Factors is performed in Attachment 2 – Air Emission Calculation Spreadsheet. Reclamation is requesting operating limits in its permit that are consistent with this operating schedule. However, these limits are not considered synthetic minor limits as potential emissions, at 8,760 hours of operation, do not exceed the major source thresholds

The results of the average annual emissions for Emission Factors is performed in Attachment 2 – Air Emission Calculation Spreadsheet.

4.0 INDIAN COUNTRY REGULATORY REQUIREMENTS

4.1 Minor NSR Permits

Sources must apply for a minor New Source Review (NSR) permit for any emission unit with potential emissions which exceed established permit exemption thresholds, which are referenced in the Table I, 40 CFR 49.153 in attainment areas or non-attainment areas.

As indicated Reclamation operations with the use of the booster pump system will result in potential emissions which exceed permit exemption thresholds. Pursuant to the regulation, if the PTE of the source is greater than the exemption thresholds but less than federal major source thresholds (i.e. generally 100 TPY in non-attainment areas), the source must apply for a minor NSR permit. The engine will be located in a PM10 nonattainment area (Yuma planning area), and is attainment or unclassifiable for all other National Ambient Air Quality Standards..

4.2 Air Quality Review

As indicated in Section 3.0 of this document the proposed booster pumps will result in potential emissions of PM, PM10, PM2.5, Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, and Volatile Organic Compounds. Into the ambient air via the exhaust stacks of the motor systems. Allowable emissions at the requested operating rate are well below the PSD significant emissions rates. As such, the project will not cause or contribute to a violation of the National Ambient Air Quality Standards or PSD incr

As indicated in Section 3.0 of this document the proposed booster pumps will result in potential emissions of Nitrous Oxide, Carbon Monoxide, Sulfur Dioxide, and Volatile Organic Compounds. Into the ambient air via the exhaust stacks of the motor systems. The Nitrous Oxide, Sulfur Dioxide, Carbon Monoxide, and Volatile Organic Compounds are below standard on allowable PTE-ton/year.

4.3 Analysis of Endangered Species:

Federally listed threatened, endangered, or candidate species which may occur in the vicinity of the project area: Razorback sucker (*Xyrauchen texanus*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Yuma clapper rail (*Rallus longirostris yumanensis*), and the Yellow-billed cuckoo (*Coccyzus americanus*).

Vegetation: There are no endangered plants in the project area. The Project's dredging areas above Laguna Dam consisted of impacting mostly upland areas with salt cedar and arrow weed, dredging in open water, and in some marsh vegetation (cattails and phargmites). There is no riparian vegetation consisting of willow and cottonwood trees in the construction/dredging footprint. The nearest cottonwood/willow tree habitats are located in an adjacent area (Pratt Nursery area), located about ¼ of a mile away and a small set of cottonwood trees located at the eastern end of Area B. Dredging within the previously established dredging footprint will not impact the Yellow-Billed Cuckoo or proposed critical habitat designations.

Section 7 of the Endangered Species Act - The proposed project is a covered activity under the Reclamation's Lower Colorado River (LCR) Multi-Species Conservation Program's (MSCP) Biological Opinion dated March 4, 2005. The U.S. Fish and Wildlife Service's biological and conference opinion addressed impacts from the Proposed Laguna Reservoir Restoration Project as part of the LCR MSCP covered Federal actions and includes incidental take statements for species known to be in the vicinity of the Project including the Federally listed endangered Yuma clapper rail (*Rallus longirostris yumanensis*), Federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*), and Federal candidate for listing yellow-billed cuckoo (*Coccyzus americanus*). See attached letter.

4.4 National Historic Preservation Act Review:

Class III cultural resource studies were conducted for the Laguna Reservoir Restoration Project to determine the presence or absence of potentially significant prehistoric and historic resources within the proposed dredging boundaries that might be considered a historic property under 36 CFR 60.4. The investigation consisted of a review of all relevant site records and reports on file with Arizona's Cultural Resource Inventory and the Southeastern Information Center of the California Historical Resource Information System, a pedestrian survey of the project area, and consultation with Native American representatives with possible knowledge of cultural resources in the project areas. No cultural resources were identified within the project area. Although visibility was poor in some areas, the study determined that the probability of encountering undocumented cultural resources within the project area is very low because the proposed dredging areas consist of accumulated sediment deposited during this century, especially since the construction of Imperial Dam in the 1930s. The State Historic Preservation Offices (SHPO) of California and Arizona have concurred with the findings (no adverse affect) of the Class III study on 6 January 2006 and 14 December 2005, respectively.

Additionally, no cultural resources were identified in the disposal area. In response to a request for consultation by Reclamation, California SHPO concluded that Reclamation took reasonable measures to identify historic properties in the area of potential effect, conducted the appropriate Native American consultation, and the Section 106 compliance efforts conform to applicable standards. SHPO also noted Reclamation's previous stipulation for use of the disposal site, in lieu of a less than Class III survey of this area: *In the event of an inadvertent discovery of archaeological or historical cultural resources, all activity shall cease in the area of the discovery. Immediate telephone notification of the discovery shall be made to the Area Archaeologist or a responsible Federal Agency Official. In addition, all reasonable efforts to protect the cultural resources discovered shall be made. The Activity may resume only after the Federal Agency has authorized a continuance.* This stipulation would also apply to all Project-related activities. Based on the Class II and III surveys described above, there are no archaeological resources within the project area. However, the Laguna Dam, itself, is eligible for listing on the National Register of Historic Places (NRHP) under the NHPA (Pfaff, Queen, and Clark 1999) and, therefore, qualifies as a historic property under 36 CFR 60.4. The dam is eligible as a stand alone feature and as a contributing feature associated with Reclamation's historic Yuma Project.

Mitigation Measures With implementation of the following mitigation measure, potential impacts on the Laguna Dam would be avoided:

- Dredging operations near the dam would include a 50-foot buffer area from dam crest to dredge to ensure that no dam feature would be inadvertently impacted during dredging operations.
- Project activities within 100 feet of the Laguna Dam shall be monitored by an archeologist that meets the Secretary of the Interior's professional qualification standards for archeology.

Tribal Coordination: The Bureau of Reclamation previously met with the Quechan Nation to elicit their opinions and potential concerns regarding the current project. The Quechan Council on the Fort Yuma Reservation was briefed about the Project on September 15, 2005 and November 16, 2005, at which time the council was provided project materials that were previously distributed during the public scoping meeting. In addition, a representative of the Fort Yuma Reservation participated in the archaeological field reconnaissance that was conducted for the Project. Reclamation has also apprised the Bureau of Indian Affairs (BIA), Phoenix Office, of the Proposed Action. Based on discussions with the Quechan Council and BIA, there are no recorded Indian Trust Assets within the project area. The Quechan Council requested that they be kept informed about the Project, especially regarding potential cultural resources impacts. The Quechan Tribe has expressed their support for the restoration project.

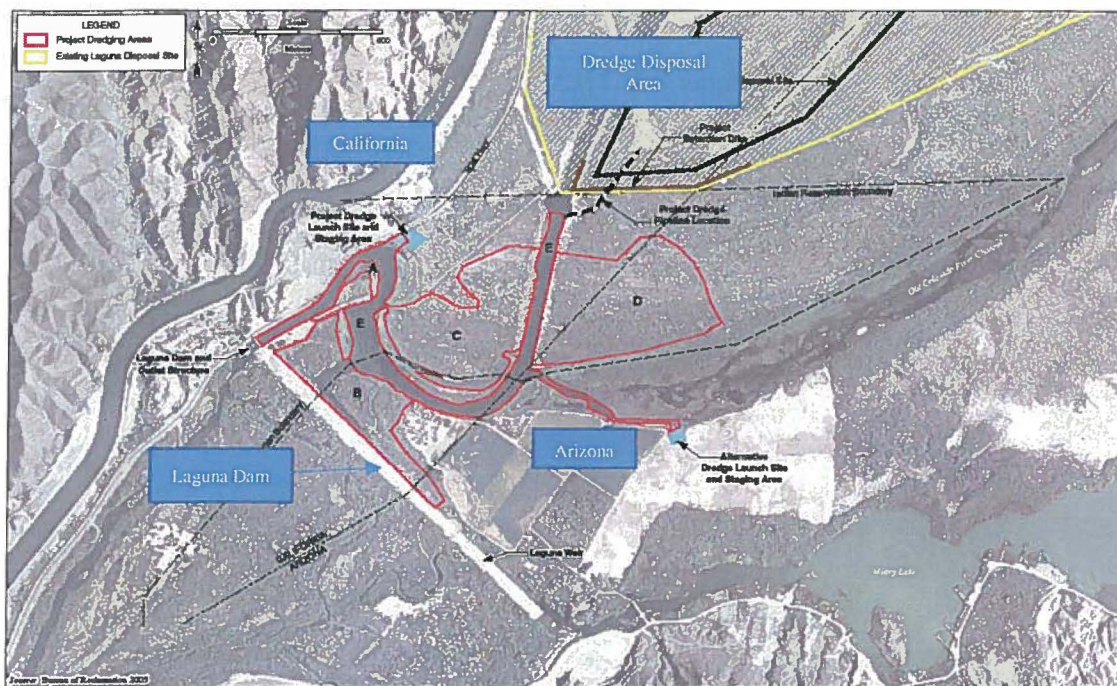


Figure ES-1. Project Layout Associated with Alternative 1 (Proposed Action)

Map showing the proposed dredging Areas (A, B, C, D, and E) highlighted in red.
To date Area B and the lower section of Area E have been completed.
The dredge is currently operating in Area C, see Photos No. 2, 3, and 4.

Photos

Date of Photo: November 13, 2012

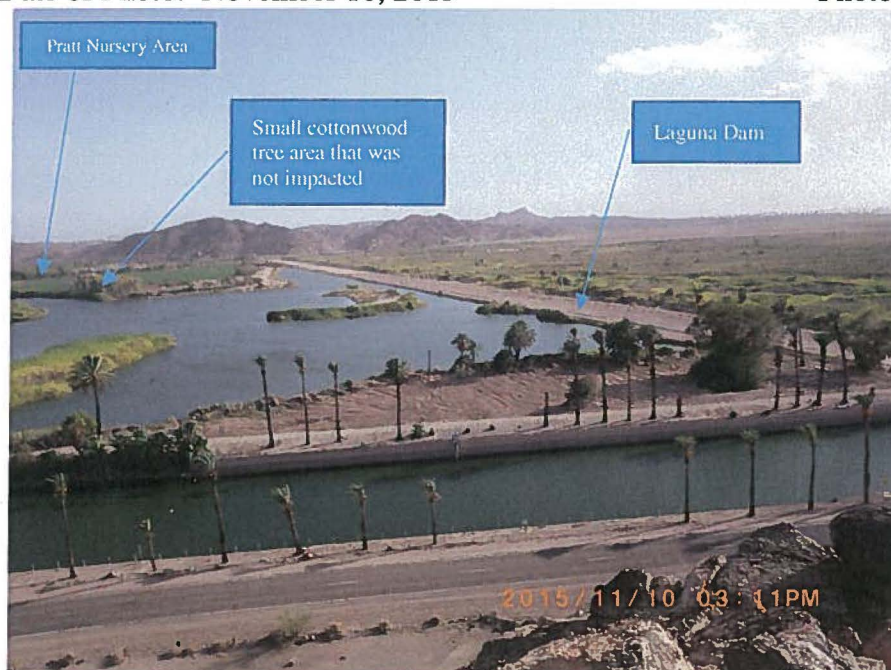
Photo 1



Looking east along the project site (Area B). Before dredging activities commenced, land based equipment was used to remove vegetation and overburden (dry) material in the area.

Date of Photo: November 10, 2015

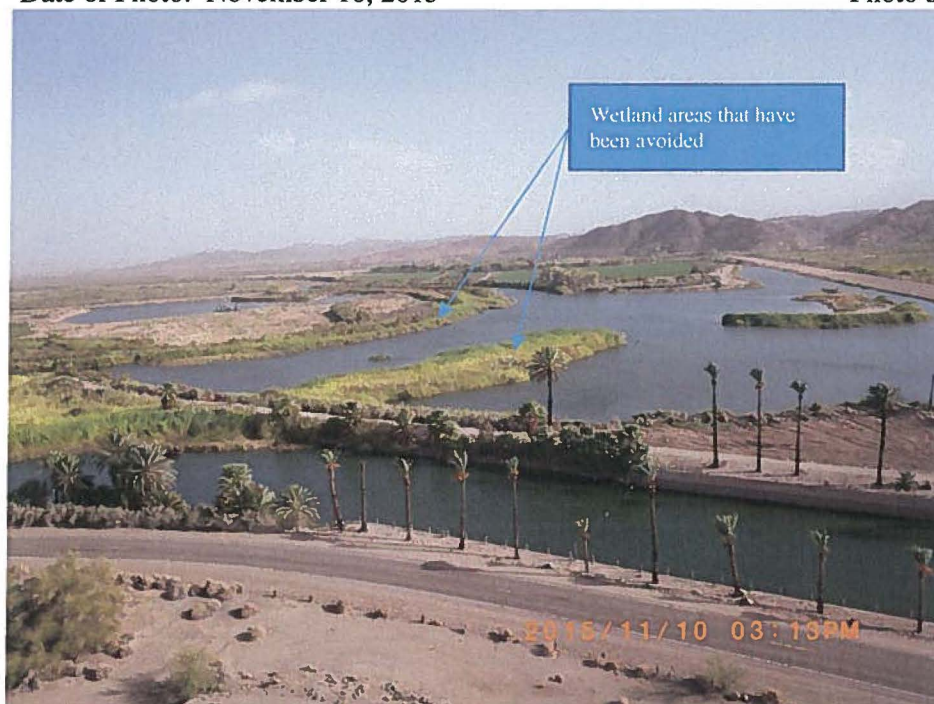
Photo 2



Looking east along Laguna Dam weir showing Area B.

Date of Photo: November 10, 2015

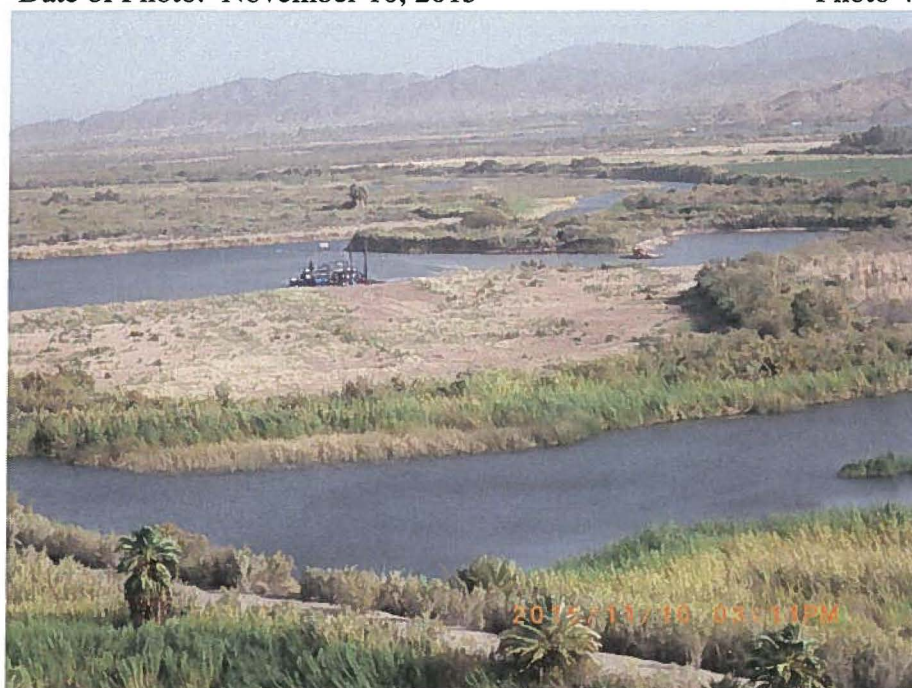
Photo 3



View showing wetland areas that have been avoided.

Date of Photo: November 10, 2015

Photo 4



Close up view of the dredge working in Area C.

Application for Federal Minor New Source Review Program in Indian Country



United States Environmental Protection Agency
Pacific Southwest – Region 9
Federal Minor New Source Review Program in Indian Country

Application for New Construction

Please check all that apply to show how you are using this form:

- ☐ Proposed Construction of a New Source
☒ Proposed Construction of New Equipment at an Existing Source
☐ Proposed Modification of an Existing Source
☐ Other – Please Explain _____

Please submit information to:

U.S. EPA at:

Air Division, Permits Office (Air-3)
U.S. EPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105

For more information:

<http://www.epa.gov/caa-permitting/tribal-nsr-permits-region-9>, call (415) 972-3974, or email
R9AirPermits@epa.gov.

Tribe:

The Tribal Environmental Contact for the specific reservation:

Please contact EPA Region 9 if you need assistance in identifying the appropriate Tribal Environmental Contact and address.

A. General Source Information

1. Company Name Bureau of Reclamation		2. Source Name Ellicott 860 SL Series Booster Pump	
3. Type of Operation Dredging		4. Portable Source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 5. Temporary Source? <input type="checkbox"/> Yes <input type="checkbox"/> No	
6. NAICS Code 237990		7. SIC Code 1629	
8. Physical Address (home base for portable sources) Laguna Field Office, 2400 Imperial Road, Winterhaven, California			
9. Reservation* Quechan	10. County* Yuma and Imperial	11a. Latitude* 114 29 13.22W	11b. Longitude* 32 49 34.21 N
12a. Quarter-Quarter Section*	12b. Section* 30 and 31	12c. Township* T.15.S.	12d. Range* R.24.E.

* Provide all locations of operation for portable sources

B. Contact Information

1. Owner Name Bureau of Reclamation, Mr. Jim Tate		Title Operations Manager
Mailing Address 7301 South Calle Agua Salada, Yuma, Arizona 85365		
Email Address hcabrera@usbr.gov		
Telephone Number 928-343-8227	Facsimile Number 928-343-	
2. Operator Name (if different from owner) Bureau of Reclamation, Mr. Jim Tate		Title Operations Manager
Mailing Address 7301 South Calle Agua Salada, Yuma, Arizona 865365		
Email Address hcabrera@usbr.gov		
Telephone Number 928-343-8227	Facsimile Number 928-343-8405	
3. Source Contact Bureau of Reclamation – Henry Cabrera		Title Sr. Environmental Protection Specialist
Mailing Address 7301 South Calle Agua Salada, Yuma, Arizona 85365		
Email Address hcabrera@usbr.gov		
Telephone Number 928-343-8227	Facsimile Number 928-343-8405	
4. Compliance Contact Ms. Lisa Beckman		Title Environmental Engineer
Mailing Address Air Division, Permits Office, Air 3		
Email Address Beckman.Lisa@epa.gov		
Telephone Number 415-972-3811	Facsimile Number	

C. PREVIOUS PERMIT ACTIONS (Provide information in this format for each permit that has been issued to this source. Provide as an attachment if additional space is necessary)

Facility Name on the Permit
New Source on Permit
Permit Number
To Be Given by EPA
Date of the Permit Action

Facility Name on the Permit
Permit Number
Date of the Permit Action

Facility Name on the Permit
Permit Number
Date of the Permit Action

Facility Name on the Permit
Permit Number
Date of the Permit Action

Facility Name on the Permit
Permit Number
Date of the Permit Action

D. Attachments

Include all of the following information as attachments to this form

☐ **FORM SYNMIN** - New Source Review Synthetic Minor Limit Request Form, if synthetic minor limits are being requested.

X Narrative description of the proposed production processes. This description should follow the flow of the process flow diagram to be submitted with this application.

X Process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment.

X A list and descriptions of all proposed emission units and air pollution-generating activities.

X Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.

X Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.

X Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.

X A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.

X **Criteria Pollutant Emissions** - Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM₁₀, PM_{2.5}, sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H₂SO₄), hydrogen sulfide (H₂S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

These estimates are to be made for each emission unit, emission generating activity, and the project/source in total. Note, there are no insignificant emission units or activities in this permitting program, only exempted units and activities. Please see the regulation for a list of exempted units and activities.

X **Air Quality Review**

X **ESA (Endangered Species Act)**

X **NHPA (National Historic Preservation Act)**

E. TABLE OF ESTIMATED EMISSIONS

The following estimates of the total emissions in tons/year for all pollutants contained in your worksheet stated above should be provided.

Pollutant	Total Actual Emissions (tpy)	Total Allowable or Potential Emissions (TPY)	
PM	n/a	1.16	PM - Particulate Matter PM ₁₀ - Particulate Matter less than 10 microns in size PM _{2.5} - Particulate Matter less than 2.5 microns in size SO ₂ - Sulfur Oxides NO _x - Nitrogen Oxides CO - Carbon Monoxide VOC - Volatile Organic Compound Pb - Lead and lead compounds Fluorides - Gaseous and particulates H ₂ SO ₄ - Sulfuric Acid Mist H ₂ S - Hydrogen Sulfide TRS - Total Reduced Sulfur RSC - Reduced Sulfur Compounds
PM ₁₀		1.16	
PM _{2.5}		1.16	
SO _x		.02	
NO _x		17.52	
CO		9.58	
VOC		1.17	
Pb		0	
NH ₃		0	
Fluorides		0	
H ₂ SO ₄		0	
H ₂ S		0	
TRS		0	
RSC		0	

Emissions calculations must include fugitive emissions if the source is one the following listed sources, pursuant to CAA Section 302(j):

- (a) Coal cleaning plants (with thermal dryers);
- (b) Kraft pulp mills;
- (c) Portland cement plants;
- (d) Primary zinc smelters;
- (e) Iron and steel mills;
- (f) Primary aluminum ore reduction plants;
- (g) Primary copper smelters;
- (h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (i) Hydrofluoric, sulfuric, or nitric acid plants;
- (j) Petroleum refineries;
- (k) Lime plants;
- (l) Phosphate rock processing plants;
- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;
- (s) Secondary metal production plants;
- (t) Chemical process plants
- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (w) Taconite ore processing plants;
- (x) Glass fiber processing plants;
- (y) Charcoal production plants;
- (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, and
- (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act

E(ii) – Proposed New Construction at an Existing Source or Modification of an Existing Source

Pollutant	Current Actual Emissions (tpy)	Current Allowable Emissions (tpy)	Post-Change Potential Emissions (tpy)	Post-Change Allowable Emissions (tpy)
PM				
PM ₁₀				
PM _{2.5}				
SO ₂				
NO _x				
CO				
VOC				
Pb				
Fluorides				
H ₂ SO ₄				
H ₂ S				
TRS				
RSC				

PM - Particulate Matter

PM₁₀ - Particulate Matter less than 10 microns in size

PM_{2.5} - Particulate Matter less than 2.5 microns in size

SO₂ - Sulfur Oxides

NO_x - Nitrogen Oxides

CO - Carbon Monoxide

VOC - Volatile Organic Compound

Pb - Lead and lead compounds

Fluorides - Gaseous and particulates

H₂SO₄ - Sulfuric Acid Mist

H₂S - Hydrogen Sulfide

TRS - Total Reduced Sulfur

RSC - Reduced Sulfur Compounds

The public reporting and recordkeeping burden for this collection of information is estimated to average 20 hours per response, unless a modeling analysis is required. If a modeling analysis is required, the public reporting and recordkeeping burden for this collection of information is estimated to average 60 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Instructions

(Please do not include a copy of these instructions in the application you submit to us.)

Use of This Form

- Proposed new construction or modifications should first be evaluated to determine if the change is major under the major NSR program using the procedures at 40 CFR 52.21 (i.e., baseline actual to projected actual applicability test). If the proposed construction does not qualify as a major under that test, then it may be subject to the requirements of the minor NSR rule at 40 CFR 49.151.

Helpful Definitions from the Federal Minor NSR Rule (40 CFR 49) – This is not a comprehensive list.

- 40 CFR 49.152(d) - Modification** means any physical or operational change at a source that would cause an increase in the allowable emissions of the affected emissions units for any regulated NSR pollutant or that would cause the emission of any regulated NSR pollutant not previously emitted.

The following exemptions apply:

- (1) A physical or operational change does not include routine maintenance, repair, or replacement.
- (2) An increase in the hours of operation or in the production rate is not considered an operational change unless such increase is prohibited under any federally-enforceable permit condition or other permit condition that is enforceable as a practical matter.

- (3) A change in ownership at a source is not considered a modification.

- 40 CFR 49.152(d) - Allowable emissions** means “allowable emissions” as defined in §52.21(b)(16), except that the allowable emissions for any emissions unit are calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit’s potential to emit.
- 52.21(b)(16) - Allowable emissions** means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:
 - The applicable standards as set forth in 40 CFR parts 60 and 61;
 - The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

(iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

A. General Facility Information

1. Company Name & Operator Name (if the operator of the facility is different than the owner, please provide this information): Provide the complete company and operator names. For corporations, include divisions or subsidiary names, if any.

2. Facility Name: Provide the facility name. Please note that a facility is a site, place, location, etc... that may contain one or more air pollution emitting units.

3. Type of Operation: Indicate the generally accepted name for the operation (i.e., asphalt plant, gas station, dry cleaner, sand & gravel mining, oil and gas wellsite, tank battery, etc.).

4. Portable Source: Will this facility operate in more than one location? Some examples of portable sources include asphalt batch plants and concrete batch plants.

5. Temporary Source: A temporary source, in general, would have emissions that are expected last less than 12 months.

6. NAICS Code: North American Industry Classification System. The NAICS Code for your facility can be found at the following link → [North American Industry Classification System](http://www.census.gov/epcd/naics/nsic2ndx.htm#S1) (<http://www.census.gov/epcd/naics/nsic2ndx.htm#S1>).

7. SIC Code: Standard Industrial Classification Code. Although the new North American Industry Classification System (NAICS) has replaced the SIC codes, much of the Clean Air Act permitting processes continue to use these codes. The SIC Code for your facility can be found at the following link → [Standard Industrial Classification Code](http://www.osha.gov/pls/imis/sic_manual.html) (http://www.osha.gov/pls/imis/sic_manual.html).

8. Physical Address: Provide the actual address of where you are proposing to construct the new facility, not the mailing address. Include the State and the ZIP Code.

9. Reservation: Provide the name of the Indian reservation within which the facility will be constructed.

10. County: Provide the County within which the source will be constructed.

11a & 11b. Latitude & Longitude: These are GPS (global positioning system) coordinates.

12a – 12d. Section-Township-Range: Please provide these coordinates in 1/4 Section/Section/Township/Range. (e.g., SW ¼, NE ¼ S36/T10N/R21E).

B. Contact Information

Please provide the information, requested, in full.

1. **Company Contact:** Provide the full name of the primary contact for the company that owns the facility.
2. **Operator Contact:** Provide the name of the primary contact for the company that operates the facility if the company operating the facility is different from the company that owns the facility.
3. **Permitting Contact:** Provide the name of primary contact, for permitting decisions, at the company that owns the facility or the company that operates the facility.
4. **Compliance Contact:** Provide the name of primary contact, responsible for compliance of the facility, at the company that owns the facility or the company that operates the facility. If this is the same as the Permitting Contact please note this on the form.

B. Current Permit Information

Provide a list of all air quality permits that have been issued for this facility. This should include any Federal Minor New Source Review (MNSR), Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review (NA NSR) permits, in addition to the most recent Part 71 permit. The permit number must be included with each permit identified.

C. Attachments

This section lists the information needed to complete the requested approval. This information should be accompanied by the supporting information listed on the form and described below. The information should be presented in enough detail to document how the facility is currently operating and/or how it is proposed to be operated.

☐ FORM SYNMIN

If synthetic minor limits are being requested, a synthetic Minor Limit Application should be included with this application.

☐ Narrative description of the proposed production processes.

1. The narrative description should follow the flow of the process flow diagram to be submitted with this application. This needs to be as comprehensive as possible to help in understanding the proposed facility and how it will be operated. For example:

What are the raw materials?

What are the properties of the raw materials?

Does the production process include heating, drying, the application of chemicals, etc?

How will the raw materials be affected by this process?

What are the out puts from each step of the process (i.e., crushed ore, dry gas, water, etc...)?

Etc....

2. The proposed operating schedule presented in terms of hours per day, days per week, and weeks per year.
 3. A list of the type and quantity of fuels and/or raw materials used. Each fuel and raw material should be described in enough detail to indicate its basic chemical components.
- ☐ A process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment. This flow chart should illustrate the detailed narrative description requested above.
- ☐ List and describe all proposed units, emission units and air pollution-generating activities. At a minimum, provide the following:
1. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
 2. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
 3. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
 4. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
 5. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.
- ☐ Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.
- ☐ Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.
- ☐ Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.
- ☐ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.
1. Include manufacturer specifications and guarantees for each control device.

Criteria Pollutant Emissions Estimates

- ☐ Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM₁₀, PM_{2.5}, sulfur oxides (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH₃), fluorides (gaseous and particulate), sulfuric acid mist (H₂SO₄), hydrogen sulfide (H₂S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

1. These estimates are to be made for each emission unit, emission generating activity, in addition to total emissions.
2. The information should include all of the supporting calculations, assumptions and references. Emission estimates must address all emission units and pollutants proposed and/or affected by the limitation and be presented in short term (e.g. pounds per hour) as well as annual (tons per year) units.
3. Any emission estimates submitted to the Regional Administrator must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:
 - Unit-specific emission tests;
 - Mass balance calculations;
 - Published, verifiable emission factors that are applicable to the unit. (i.e. manufacturer specifications)
 - Other engineering calculations; or
 - Other procedures to estimate emissions specifically approved by the Regional Administrator.
4. Guidance for estimating emissions can be found at <http://www.epa.gov/ttn/chief/efpac/index.html>.

Current Actual Emissions: Current actual emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the actual hourly emissions rate in pounds per hour (lbs/hr) times actual hours operated (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. For an **existing air pollution source (permitted and unpermitted)** that operated prior to the application submittal, the current actual emissions are the actual rate of emissions for the preceding calendar year and must be calculated using the actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year. The emission estimates must be based upon actual test data or, in the absence of such data, upon procedures acceptable to the Regional Administrator.

Current Allowable Emissions: Current allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. "Allowed" means the source is restricted by permit conditions that limit its emissions and are enforceable as a practical matter (i.e., allowable emissions). The allowable emissions for any

emissions unit are calculated considering any emissions limitations that are enforceable as a practical matter on the unit's PTE.

2. For an **existing permitted air pollution source** that operated prior to the application submittal, the current allowable emissions are the allowable rate of emissions for the preceding calendar year and must be calculated using the permitted operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.
3. For an **existing air pollution source** that does not have an established allowable emissions level prior to the modification must report the pre-change uncontrolled emissions.

Post-Change Potential Emissions (Potential uncontrolled emissions from proposed project): This is the maximum capacity of a source to emit a pollutant under its physical and operational design. This is expressed in tpy and generally is calculated by multiplying the maximum hourly emissions rate in pounds per hour (lbs/hr) times 8,760 hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. Unless the source is restricted by permit conditions or other requirements that are enforceable as a practical matter, the post-change allowable emissions would be equivalent to post-change uncontrolled emissions. For the post-change allowable emissions a lower level of allowable emissions may be proposed.
2. For physical or operational changes at minor sources and for minor physical or operational changes at major sources, the total increase in allowable emissions resulting from your proposed change would be the sum of following:
 - For each new emissions unit that is to be added, the emissions increase would be the potential to emit of each unit.
 - For each emissions unit with an allowable emissions limit that is to be changed or replaced, the emissions increase would be the allowable emissions of the emissions unit after the change or replacement minus the allowable emissions prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.
 - For each unpermitted emissions unit (i.e., a unit without any emissions limitations before the change) that is to be changed or replaced, the emissions increase would be the allowable emissions of the unit after the change or replacement minus the potential to emit prior to the change or replacement. However, this may not be a negative value. If

the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.

☐ Air Quality Review

Provide a narrative description of the current air quality conditions and the expected impact the permitted source would have on that air quality. Factors to include in the qualitative discussion are meteorology, terrain, elevation, distance to ambient air, expected emissions, stack heights, etc...

Your reviewing authority may require you to provide additional information used to determine impacts that may result from your new source or modification. You may be required to conduct and submit an Air Quality Impact Analysis (AQIA) using dispersion modeling in accordance with 40 CFR part 51, Appendix W. If required, and the AQIA demonstrates that construction of your source or modification would cause or contribute to a NAAQS or PSD increment violation, you will also be required to further reduce its impact before you could obtain a permit.

☐ ESA

The Endangered Species Act requires us, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions we authorize are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

To expedite the approval of your proposed construction, we encourage you to identify any listed species that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you: <http://www.fws.gov/endangered/>

Simply enter the State and County in which you propose to construct to obtain a general listing.

☐ NHPA

The National Historic Preservation Act requires us, in consultation with State and/or Tribal Historic Preservation Officers to ensure that actions we authorize are not likely to affect cultural resources.

To expedite the approval of your proposed construction, we encourage you to identify any cultural resources that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

<http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>

Simply enter the State and County in which you propose to construct to obtain a general listing.

Spreadsheet for Air Emission Calculations

	A	B	C	D	E	F	G	H	I
1									20 hrs day/4 days wee
2	Description	Maximum Rating	Maximum Rating Units	Emission Factor	EF Units	Pollutant	EF Basis	lb/hr	Total Allowable/PTE, ton/yr
3	800 hp, Non-emergency, Caterpillar diesel engine, Engine Family: ACPX106, T2E	800	bhp	0.0007	lb/hp-hr	PM	AP 42, Table 3.4-1	0.56	1.16
4		800	bhp	0.0007	lb/hp-hr	PM10	AP 42, Table 3.4-1	0.56	1.16
5		800	bhp	0.0007	lb/hp-hr	PM 2.5	AP 42, Table 3.4-1	0.56	1.16
6		800	bhp	0.000012135	lb/hp-hr	SOx	AP 42, Table 3.4-1, Sulfur -0.0015%	0.009708	0.02
7						NOx	Part 89 limits, Certified emissions levels for engine family by EPA for ACPX106.T was 6.2 g/kW-hr, 1 gram = 0.00220462 lb		
8		597	kW	6.4	g/kW-hr			8.42341209	17.52
9						CO	Part 89 limits, Certified emissions levels for engine family by EPA for ACPX106.T was 1.53 g/kW-hr, 1 gram = 0.00220462 lb		
10		597	kW	3.5	g/kW-hr			4.60655349	9.58
11		800	bhp	0.000705	lb/hp-hr	VOC	AP 42, Table 3.4-1	0.564	1.17
12		800	bhp			Pb	No EF, assumed less than 0.01 tpy	0	0.00
13		800	bhp			NH3	No EF, assumed less than 0.01 tpy	0	0.00
14		800	bhp			Fluorides	No EF, assumed less than 0.01 tpy	0	0.00
15		800	bhp			H2SO4	No EF, assumed less than 0.01 tpy	0	0.00
16		800	bhp			H2S	No EF, assumed less than 0.01 tpy	0	0.00
17		800	bhp			TRS	No EF, assumed less than 0.01 tpy	0	0.00
18		800	bhp			RSC	No EF, assumed less than 0.01 tpy	0	0.00
19									
20									

Air Emissions Calculation Factors Spreadsheet for 20 hours/day 4 days per week.