



**San Joaquin Valley Unified  
Air Pollution Control District**

**NuStar Terminals Operations  
Partnership, L.P.**

**ATC Number N-1181193  
Facility ID N-829**

**Draft Eco-Energy Liquid Bulk Receiving Terminal  
Supplemental Environmental Impact Report**

June 15, 2020



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# DRAFT ECO-ENERGY LIQUID BULK RECEIVING TERMINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

## **NuStar Terminals Operations Partnership, L.P. ATC Number: N-1181193**

June 15, 2020

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## A. INTRODUCTION AND PURPOSE

In 2016, Eco-Energy proposed to construct and operate a new 10-acre liquid bulk receiving terminal on the Port of Stockton's East Complex. The new Eco-Energy project would provide efficient transport of liquid bulk petroleum product (anticipated to primarily consist of ethanol) from inland sources to an existing liquid bulk terminal, the adjacent NuStar facility, for blending and outbound distribution, hereinafter referred to as the "Approved Eco-Energy Project".

Currently, the NuStar facility receives ethanol by a mixture of transportation modes, namely manifest rail and truck, both of which are inefficient. Product sent by manifest rail currently requires multiple switching events and handlings, and trucks have less capacity than rail transport, resulting in numerous trips. The new Eco-Energy terminal would replace these numerous transportation steps with streamlined unit train shipments and direct transfer from the trains to the existing NuStar facility tanks. With construction of the new Eco-Energy receiving terminal, liquid bulk petroleum products would be shipped via direct unit trains to the Eco-Energy terminal and then transferred to the adjacent NuStar terminal through a closed-loop pipeline system for export by truck. The NuStar facility is located at 2941 Navy Drive at the Port of Stockton.

The Port of Stockton has primary authority for approval and served as the Lead Agency for the project under California Environmental Quality Act (CEQA). On April 19, 2019, the Port of Stockton certified the *Environmental Impact Report for the Eco-Energy Liquid Bulk Receiving Terminal project* (EIR).

The San Joaquin Valley Unified Air Pollution Control District (District) has received an Authority to Construct (ATC) application from NuStar Terminals Operations Partnership, L.P. (NuStar) for the modification of the bulk terminal to receive, store, and loadout the ethanol fuel received at the bulk terminal from Eco-Energy. This ATC application proposes to modify the Approved Eco-Energy EIR to account for NuStar's activities that are associated with the Approved Eco-Energy Project.

As a Responsible Agency under CEQA, the District is relying on the EIR that was performed by the Port of Stockton as the original lead agency for the project and make findings as required by CEQA Guidelines section 15091, "Findings", before approving a project for which an EIR has been previously certified. However, the District in reviewing the EIR found that the construction and operational related emissions of the new 12" pipeline on the NuStar Facility and its associated pipeline activities (approximately 2,600 feet in length) to transfer ethanol fuel from Eco-Energy, LLC (Eco-Energy) to NuStar were not assessed in the EIR.

The District determined that the EIR the Port of Stockton prepared as the Lead Agency under CEQA does not provide the information the District, as the Responsible Agency, can rely on in reaching a decision whether to approve NuStar's pending ATC Application or not. In fact, the potential environmental impacts associated with the activities proposed



in the ATC application have not been addressed in the Port of Stockton's EIR. According to CEQA Guidelines section 15052, "Shift in Lead Agency Designation", where a Responsible Agency is called to grant an approval for a project subject to CEQA for which another public agency was the appropriate Lead Agency, the Responsible Agency shall assume the role of the Lead Agency when any of the conditions in section 15052 occur.

Therefore, in coordination with the Port of Stockton, the District is assuming the duty of the Lead Agency under CEQA and has prepared a Supplemental Environmental Impact Report (SEIR), this document.

CEQA Guidelines section 15162, referenced in section 15163, lists the conditions requiring preparation of a Subsequent or Supplemental EIR:

*"When an Environmental Impact Report (EIR) has been certified, or a negative declaration adopted for a project, no subsequent EIR will be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:*

- 1) Substantial changes are proposed in the project that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
- 2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
- 3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:*
  - a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*
  - b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
  - c) Mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*



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- d) *Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.”*

CEQA Guidelines section 15163 states:

- “a) The lead or responsible agency may choose to prepare a supplement to an EIR rather than a subsequent EIR if:*
- 1) Any of the conditions described in section 15162 would require the preparation of a subsequent EIR, and*
  - 2) Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.*
- b) The supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised.*
- c) A supplement to an EIR shall be given the same kind of notice and public review as is given to a draft EIR under section 15087.*
- d) A supplement to an EIR may be circulated by itself without recirculating the previous draft or final EIR.*
- e) When the agency decides whether to approve the project, the decision-making body shall consider the previous EIR as revised by the supplemental EIR. A finding under section 15091 shall be made for each significant effect shown in the previous EIR as revised.”*

CEQA Guidelines section 15162 provides the authority for a Lead or Responsible Agency to prepare a supplemental, rather than a subsequent, EIR when only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. An SEIR need only contain the information necessary to make the previous EIR adequate for the project as revised.

The ATC application from NuStar is for the modification of the bulk terminal to receive, store, and loadout the ethanol fuel received at the bulk terminal from Eco-Energy. The Eco-Energy EIR did not fully account for the construction and operational related activities from the modification to the NuStar Facility. These minor changes will be addressed in this SEIR.

Therefore, the purpose of this SEIR is to evaluate the potential environmental impacts of the NuStar pipeline and its associated activities (NuStar Modification) not addressed by the Port of Stockton’s EIR for the Approved Eco-Energy Project.



This SEIR provides: 1) additional information pertaining to the NuStar Modification; and 2) an evaluation of whether that information indicates the potential for significant impacts or an increased magnitude of impacts to environmental resource areas that were not already determined to be significant by the approved EIR. Specifically, this SEIR evaluates impacts related to the following:

- The resource areas potentially affected by the additional information – Air Quality and Greenhouse Gas (GHG) Emissions
- A new resource area – Energy – that was added to the Appendix G Environmental Checklist of the CEQA Guidelines in December 2018 and was not evaluated in the Eco-Energy EIR, which went out for public comment in 2017

## **B. AUTHORITY**

The District has discretionary approval power over the ATC project for NuStar, pursuant to District Rule 2010 (Permits Required) and District Rule 2201 (New and Modified Stationary Source Review Rule). The District determined that no other agency has broader discretionary approval power over the ATC project. As such, the District is the public agency having principal responsibility for approving the ATC project and serves as Lead Agency (CCR §15367).

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Under CEQA the Lead Agency (District) is required to perform the following to comply with CEQA requirements:

- Conduct preliminary reviews to determine if applications are subject to CEQA [CCR §15060].
- Conduct review to determine if projects are exempt from CEQA [CCR §15061].
- Prepare Initial Studies for projects that may have adverse environmental impacts [CCR §15063].
- Determine the significance of the environmental effects caused by the project [CCR §15064].





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- Prepare Negative Declarations or Mitigated Negative Declarations for projects with no significant environmental impacts [CCR §15070].
  - Prepare, or contract to prepare, EIRs for projects with significant environmental impacts [CCR §15081].
  - Adopt reporting or monitoring programs for the changes made to projects or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment [PRC §21081.6 & CCR §15057].
  - Comply with CEQA noticing and filing requirements.

## **C. BACKGROUND INFORMATION**

### **Approved Eco-Energy Project**

The Approved Eco-Energy Project is to construct and operate a new 10-acre liquid bulk receiving terminal on the Port of Stockton's East Complex at 630 Port Road 23, Stockton, California. The site largely consists of a vacant concrete and compacted dirt lot bordered on all sides by rail lines. The Approved Eco-Energy Project involves the construction of new rail leads and switches; a rail offload yard to temporarily store up to 108 railcars; the pipeline to connect the terminal to the nearby NuStar facility tanks; safety eye wash stations; a single-story support building to house administration, fire protection, electrical, and mechanical support equipment; and a cast-in-place concrete pump station. An existing railcar repair building on the east side of the project area would be demolished to accommodate these improvements. By constructing the proposed receiving terminal, liquid bulk petroleum products would be transferred from the Eco-Energy terminal to the adjacent NuStar bulk petroleum terminal through a closed-loop pipeline system. A maximum total of 60 unit trains per year would be received at the Eco-Energy facility. Per the FEIR, construction of the Approved Eco-Energy Project is expected to occur as soon as applicable permits are issued by the Port of Stockton and/or the District, and would last approximately 10 to 12 months.

### **Approved Eco-Energy Project and the Environmental Factors Potentially Affected**

The approved Eco-Energy EIR found that the environmental factors listed below would have a potentially significant impact.

- Air Quality
- Cultural Resources
- Geology/Soil
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources
- Mandatory Findings of Significance



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### **NuStar Modification Description**

As discussed above, the Approved Eco-Energy Project would construct a new liquid bulk receiving terminal to receive unit trains of ethanol, and transfer the ethanol via pipeline to the neighboring NuStar facility for storage. The NuStar Modification deals with the construction and operation for the portion of the pipeline system on NuStar's property, coming from the Eco-Energy facility. The pipeline will transfer ethanol from the Eco-Energy facility to the NuStar facility. The pipeline construction on NuStar property for the NuStar Modification would be approximately 2,600 feet in length for the new 12" pipeline and its associated pipelines.

The NuStar Modification would include facility modifications for receipt and storage of ethanol that will be received from the adjacent Eco-Energy facility at NuStar's liquid bulk terminal at 2941 Navy Drive at the Port of Stockton. Under the Approved Eco-Energy Project, the ethanol would then be shipped out by trucks from the NuStar facility. Gasoline that is currently stored in Tanks 8002 would be stored in three existing tanks. The NuStar Modification would not increase the storage capacity at the NuStar facility.

While the NuStar Modification was not specifically identified in the Eco-Energy EIR, the pipeline on NuStar's property and the receipt and storage of ethanol proposed in NuStar's ATC application are envisioned in the EIR. The construction from the NuStar Modification would be less disruptive than the components of the Approved Eco-Energy Project, which include grading, excavation, underground pipeline installation, rail construction, or building demolition and construction. The volume of ethanol that would be handled at the NuStar facility is the same as identified in the Approved Eco-Energy Project.

### **Ethanol Transfer Procedures between Eco-Energy facility and NuStar facility**

Ethanol originating from the adjacent Eco-Energy terminal would be transferred to the NuStar facility through a closed-loop pipeline system, stored in existing tanks, and transported offsite via trucks. NuStar has a business contract to receive ethanol fuel from the adjacent Eco-Energy facility. Eco-Energy receives the ethanol by rail and will transfer it to the NuStar facility via a pipeline. A custody meter will be installed at the boundary separating the NuStar and Eco-Energy facilities. Regarding the truck loading operation, the NuStar Modification will not involve adding new truck loading bays. However, additional pipelines and fugitive components will be installed to the truck loading racks for ethanol loading purposes.

During operation of the Approved Eco-Energy Project, ethanol would be transferred from the incoming Eco-Energy custody meter through the new 12-inch pipeline on the NuStar facility into Tanks 8001 and 8002, where it would be stored until it is ready for transfer to trucks. The duration of offloading into the tanks would be approximately 24 hours, and the ethanol would typically be held in the tanks for an average of 2 weeks. The ethanol would be pumped from the tanks through the new 12-inch pump discharge line and new 10 inch-pipeline connected to the existing onsite truck racks (see Figure 4 and 5). Empty trucks would enter the terminal through the truck gates and would be loaded with ethanol at the truck racks.



During ethanol transfers, a minimum of one terminal operator would be present 24 hours per day, 7 days per week, to oversee operations. Outside of product transfer periods, the site would be staffed for security and facility maintenance by up to two employees working 12-hour shifts, Monday through Friday. Staffing needs would be met with existing employees and employee offices would continue to be in the existing support building.

Potential operational emissions would include fugitive volatile organic compounds (VOC) from pipeline, tank, and truck rack connection points (valves, flanges, and pumps) from truck loading and tank storage. Vapors from truck loading are routed to an existing Vapor Combustion System. The system consists of a 300,000-gallon vapor holding tank, a vapor processing and conveying system, and a 40-million British thermal units per hour propane-fired Vapor Combustion Unit. The system has a 99 percent VOC destruction efficiency. All the tanks involved in the project are equipped with Best Available Control Technology for VOCs, as required by the District.

The NuStar terminal has existing onsite spill control infrastructure and a *Spill Prevention, Control, and Countermeasure (SPCC) Plan*. The existing SPCC Plan covers petroleum products received via pipeline, railcar, and tanker truck, and shipped out via pipeline, truck, and railcar. The SPCC Plan addresses spills occurring from tank overflow, truck and railcar product transfer, and pipeline leaks, and identifies site drainage, timing of inspections, tests and recordkeeping, and personnel training. The SPCC Plan will be updated to include the NuStar Modification happening at the facility, which includes the movement of ethanol through new piping, the transfer of ethanol to trucks, and the storage of ethanol in existing Tanks 8001 and 8002.

### **NuStar Modification Activities Covered under the SEIR**

Several activities associated with the NuStar Modification were not addressed in the Approved Eco-Energy EIR. Therefore this SEIR will address the following:

- The installation of new piping and truck rack supply pumps at the NuStar facility
- The movement of ethanol through the piping
- The transfer of ethanol to trucks
- The storage of ethanol in existing Tanks 8001 and 8002

### **NuStar Modification Location**

The NuStar Modification is for the Approved Eco-Energy Project, located within the central California region of San Joaquin County, which is in the San Joaquin Valley Air Basin (see Figure 1). The existing NuStar terminal is located on 3.56 acres at 2941 Navy Drive, between Navy Drive and Stork Road, south of Washington Street (see Figure 2, 3, and



Table 1). The NuStar facility is surrounded to the north and east by industrial/commercial facilities (including the Eco-Energy facility to the southeast), bordered to the south by BNSF rail lines and right-of-way, and bordered to the west by undeveloped land, followed by industrial facilities and the San Joaquin River (see Figure 6, 7, 8, and 9).

**Table 1: NuStar Modification Location**

Latitude		Longitude	
37.941020°		-121.331668°	
USGS Quadrangle	Sections	Township	Range
Stockton West	17	1N	6E

The District has verified that the NuStar Modification is not within 1,000 of a school's outer boundary; therefore the public notification requirement of California Health & Safety Code 42301.6 is not applicable to the project.

**General Plan Designation and Zoning**

In the area surrounding the NuStar Modification site, the Port leases property for a variety of industrial uses, characterized by the presence of storage tanks, maritime terminals, cement and grain silos, railroad facilities, large storage buildings, and stockpiles of various commodities. The City's 2040 General Plan (City of Stockton 2018) designates the NuStar Modification site for industrial use, and the zoning classification of the NuStar Modification site and surrounding parcels is Port or Industrial, General.

**Surrounding Land Uses and Setting**

The NuStar Modification is within the City urban core, which is characterized by a mix of heavy industrial uses with limited landscape features, older residential neighborhoods, neighborhood commercial shopping centers, and a variety of other commercial and industrial parcels.

**Other Public Agencies Whose Approval Is Required**

The District has identified the following agency as having approval authority for the NuStar Modification.

***City of Stockton Building Department***

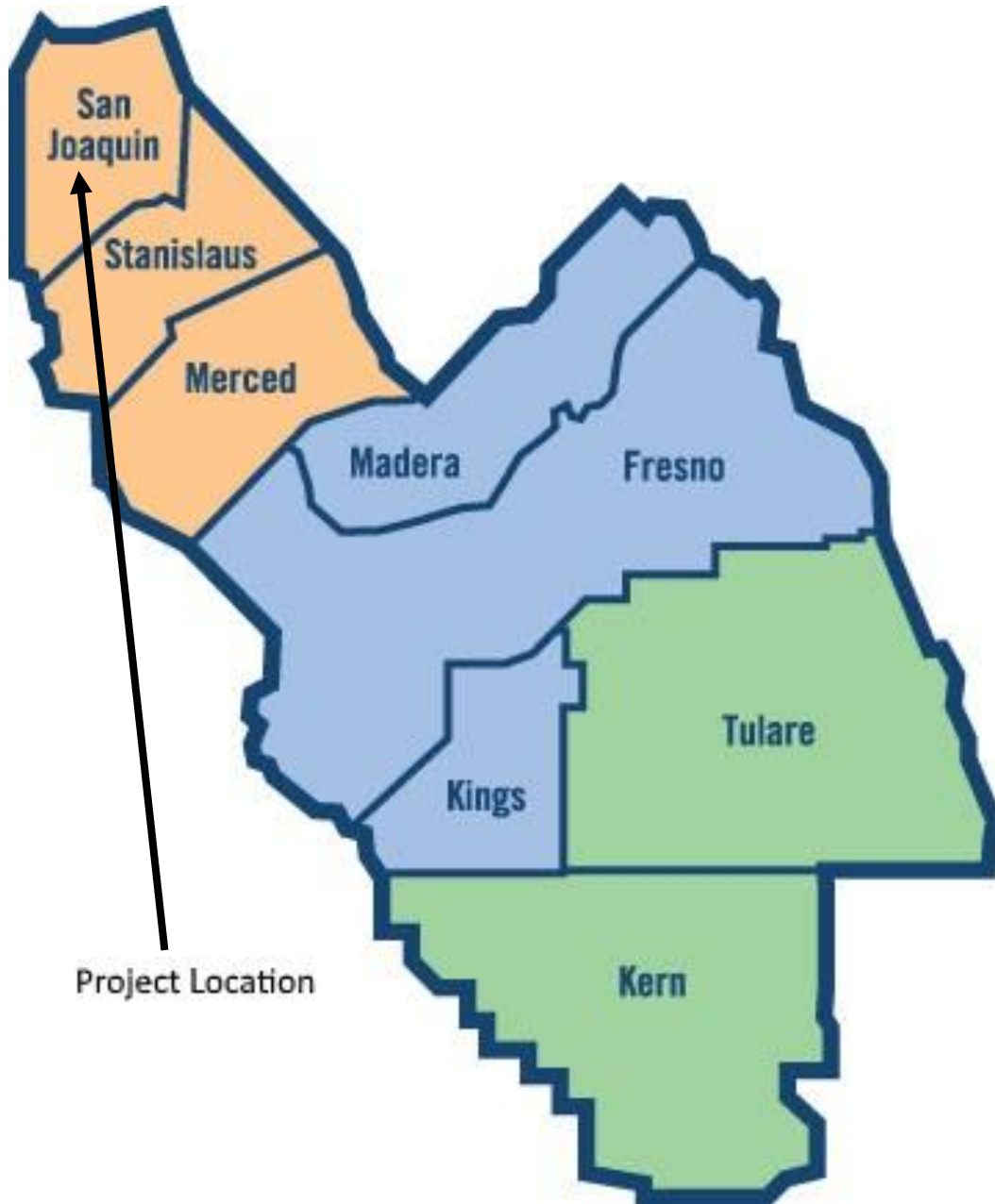
Prior to construction of the NuStar Modification, approval of mechanical, electrical, demolition, and building permits is required from the Stockton Building Department.

***City of Stockton Fire Department***

Prior to operation of the NuStar Modification, approval of fire protection system is required from the Stockton Fire Department.



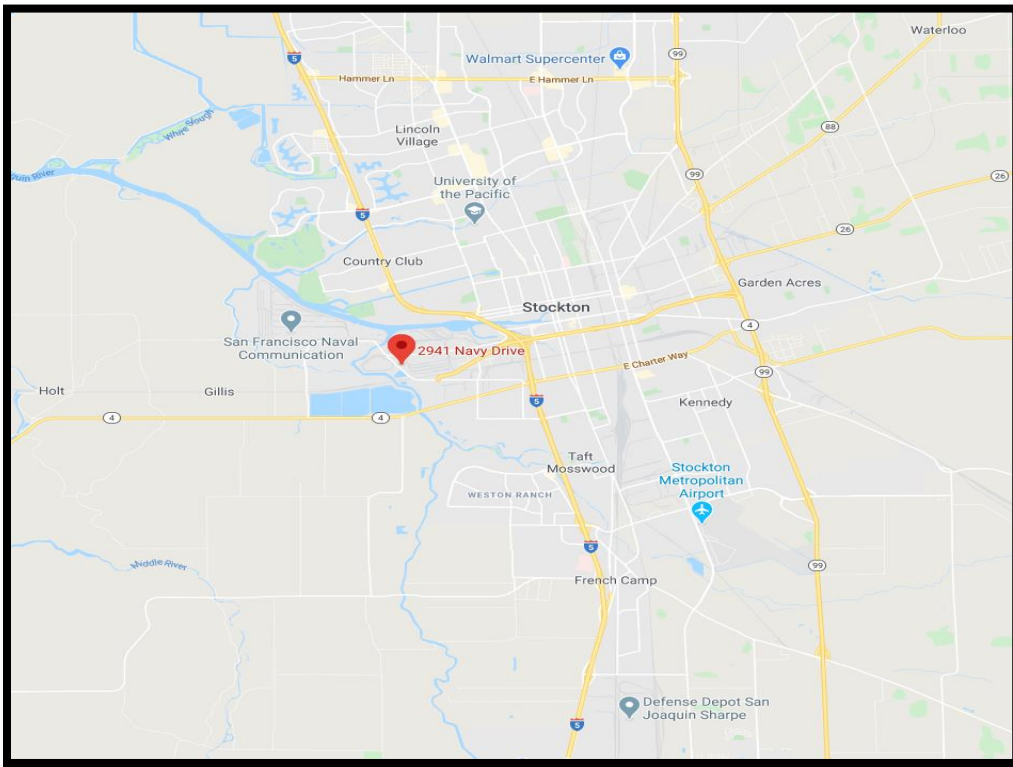
**Figure 1: San Joaquin Valley Air Basin**







**Figure 2: Regional Location in San Joaquin County**



Source: Google Maps 2020

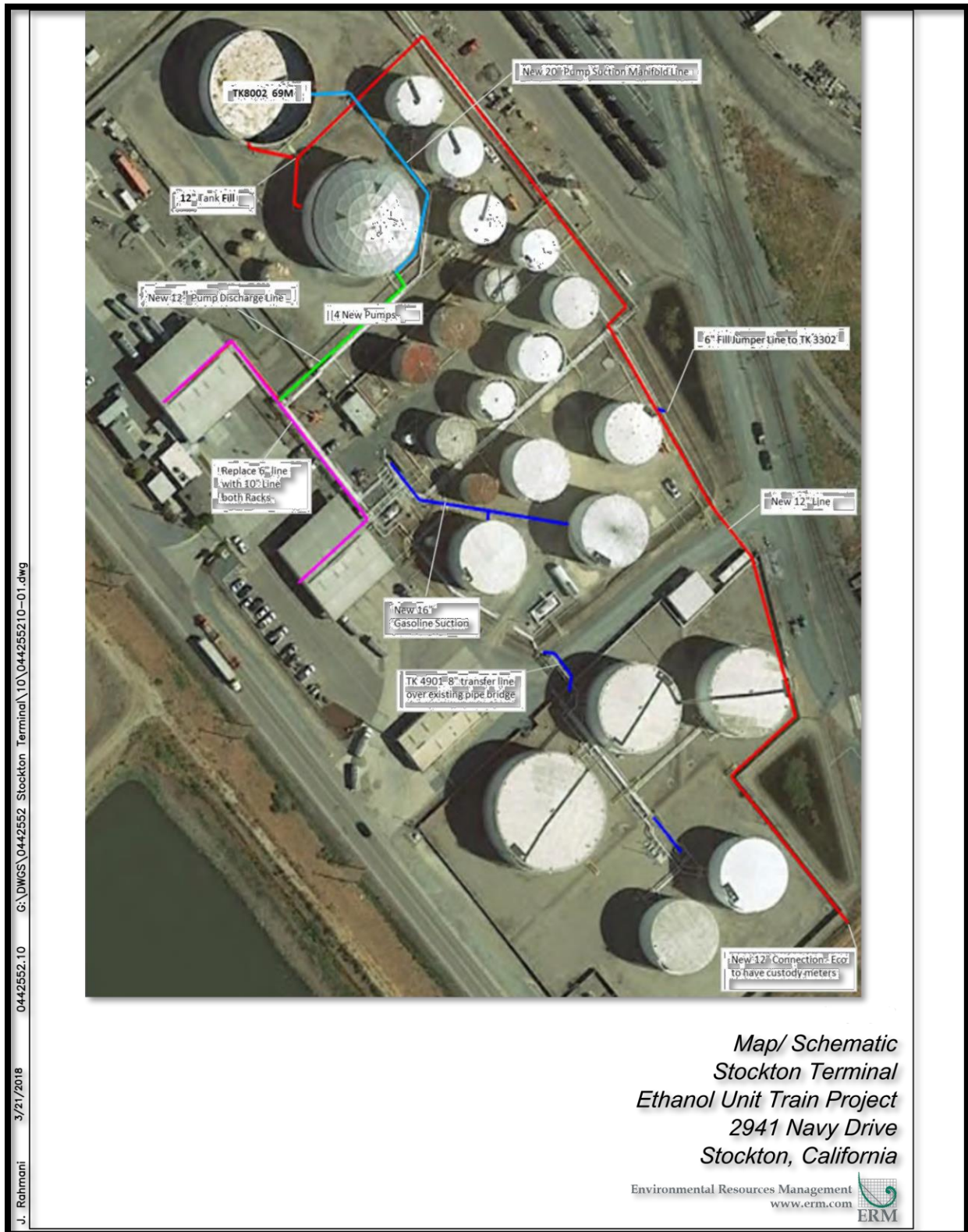
**Figure 3: Location of the NuStar Modification and the Approved Eco-Energy Project**



Source: Google Earth 2020



**Figure 4: NuStar Modification Map and Schematic**

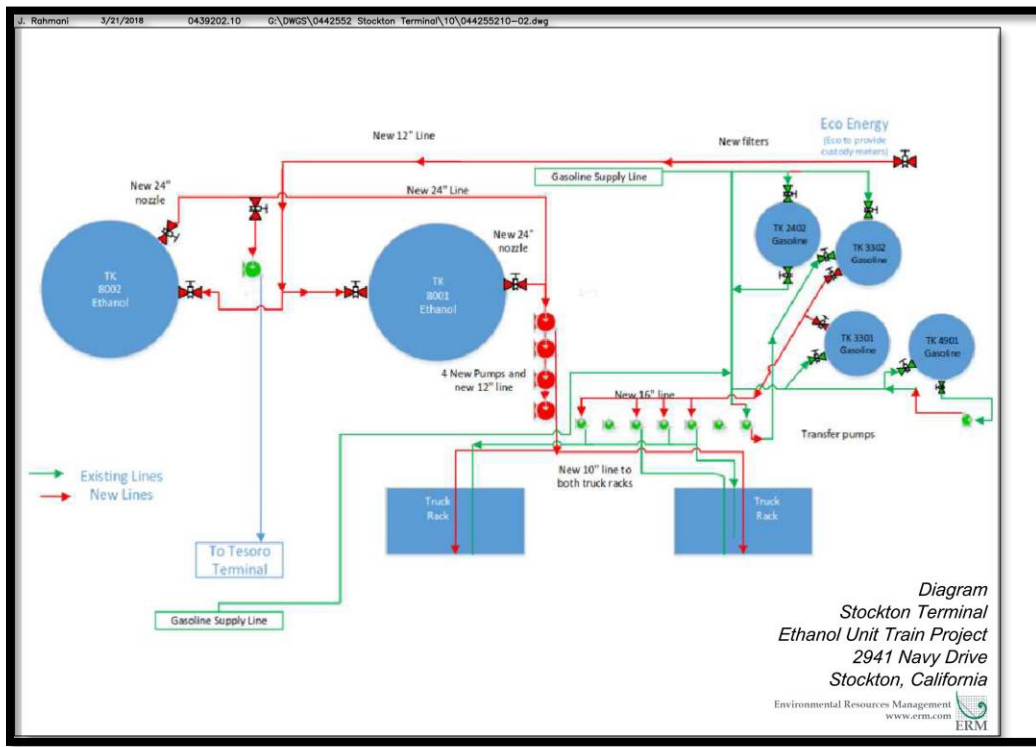


Source: Provided by NuStar Modification Consultant, ERM: Environmental Resources Management





**Figure 5: NuStar Modification Diagram**



Source: Provided by NuStar Modification Consultant, ERM: Environmental Resources Management

**Figure 6: NuStar Modification view to the North**



Source: Google Earth 2020





**Figure 7: NuStar Modification view to the South**



Source: Google Earth 2020

**Figure 8: NuStar Modification view to the East**



Source: Google Earth 2020



**Figure 9: NuStar Modification view to the West**



Source: Google Earth 2020

## **D. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

Based on the additional information related to the NuStar Modification, the following resource areas will be assessed in this SEIR:

- Air Quality
- Energy
- Greenhouse Gas Emissions





## E. DETERMINATION

I certify that the project was independently reviewed and analyzed and that this document reflects the independent judgment of the District.

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.
- I find that the proposed project changes for the previously approved EIR would not have new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The proposed project changes require only minor additions or changes necessary to make the previous EIR adequately apply to the project in the changed situation. In response, this document constitutes a SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: \_\_\_\_\_

Date: June 15, 2020

Printed Name: Morgan Lambert

Title: Deputy Air Pollution Control Officer



## F. ENVIRONMENTAL IMPACT CHECKLIST

### I. AIR QUALITY

I. Air Quality	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
<b>Would the Project:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✓	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓	
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?			✓	

#### a) **Conflict with or obstruct implementation of the applicable air quality plan?**

The District is tasked with implementing programs and regulations by the Federal Clean Air Act and the California Clean Air Act and has prepared plans to attain federal and state Ambient Air Quality Standards (AAQS). The District has established thresholds of significance for criteria pollutant emissions, which are based on federal and District NSR offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation.



The significance of the impacts of the emissions from construction, operational non-permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. For construction emissions, the annual emissions are evaluated on a consecutive 12-month period. A project would be determined to have a significant impact on air quality if the emissions sum for any criteria pollutant exceeds its respective threshold of significance. The air quality setting and significance thresholds presented in the Eco-Energy EIR have not changed for the project area since the EIR was certified, and there is no new information to present. For purposes of readily comparing potential project-related impacts described below, the District's thresholds of significance for criteria pollutant emissions are presented below in Table 2 below.

**Table 2: District Thresholds of Significance for Criteria Pollutants**

<b>Pollutant</b>	<b>Construction Emissions Threshold (*tpy)</b>	<b>Permitted Operational Emissions Threshold (*tpy)</b>	<b>Non-Permitted Operational Emissions Threshold (*tpy)</b>
NOx	10	10	10
SOx	27	27	27
PM <sub>10</sub>	15	15	15
PM <sub>2.5</sub>	15	15	15
CO	100	100	100
ROG (VOC)	10	10	10

\*tpy = tons per year  
 Note: For construction emissions, the annual emissions are evaluated on a consecutive 12-month period.

NuStar Modification Details

This section evaluates impacts to air quality factoring in new information pertaining to the NuStar Modification-related infrastructure construction and operation emissions at the NuStar facility for the receipt and storage of ethanol.

As was the case in the Eco-Energy EIR analysis, emissions associated with the NuStar Modification would include construction and operational emissions as discussed below.



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### NuStar Modification Construction

NuStar Modification would consist of installing piping to Tanks 8001 and 8002, new truck rack supply pumps, additional piping to convey ethanol from Tanks 8001 and 8002 to the truck rack area, and adding a domed roof on Tank 8002. The NuStar Modification-related modifications to the ethanol new receipt piping, storage, and truck loading infrastructure, are outlined below and shown on Figure 4:

- 1,320 feet of 12-inch aboveground piping would be installed from an incoming custody meter to Tanks 8001 and 8002.
- Four new ethanol truck rack supply pumps would be installed within the tank farm area near Tanks 8001 and 8002 to pump ethanol from the tanks to the existing north and south truck racks, to be loaded into trucks.
- 140 feet of 20-inch pump suction piping would be installed connecting Tanks 8001 and 8002 with the new ethanol truck loading pumps.
- 500 feet of 10-inch aboveground ethanol supply piping would be installed in the north and south truck racks to replace an existing 6-inch ethanol supply pipeline.
- Additional 640 feet of aboveground piping would be installed to transfer gasoline from Tank 8002 to Tanks 3301, 3302, and 4901.
- A geodesic-domed roof would be installed on Tank 8002, converting it from an external floating roof to an internal floating roof tank similar to Tank 8001.

Aboveground piping from Eco-Energy's property to the NuStar facility location is shown on Figure 4. The receipt piping will be at the Eco-Energy property to Tanks 8001 and 8002 at the NuStar terminal. Gasoline that has been stored in Tank 8002 would be transferred to Tanks 3301, 3302 and 4901 via pumps and existing piping. Tank 8001 is currently in ethanol service and would not be modified.

A concrete slab would be constructed to permanently install four 1,400-gallon-per-minute (gpm) pumps. The pumps would be used for conveying ethanol from Tanks 8001 and 8002 via the proposed new 12-inch pump discharge and new 10-inch truck supply rack piping at the location shown on Figure 4. The pumps would be connected to existing loading arms at the north and south truck rack, and would be controlled by variable frequency drives that allow a maximum loading rate of 5,500 gallons per minute.

All the NuStar Modification components described above would be constructed concurrently. Anticipated construction equipment required for the NuStar Modification includes forklifts, welders, dump trucks, excavators, concrete pumps, cranes, air compressors, skid steers, scissor lifts, and generators. The construction duration would be approximately 7 months, with a crew of 10 workers typically working between



the hours of 7 a.m. and 5 p.m., Monday through Friday. Table 3 summarizes the various construction elements for the proposed NuStar activities. Table 4 summarizes the NuStar Modification construction-related truck trips for the proposed NuStar activities.

**Table 3: NuStar Modification Construction Equipment and Duration Summary**

Proposed Improvement	Construction Equipment			Construction Duration (days)
	Equipment	Number	Hours per day	
Civil/Mechanical	Forklifts	2	6	90
	Welders	6	8	100
	Dump Truck	1	6	15
	Excavator	1	6	20
	Concrete Pump Truck	1	4	5
	Crane	1	4	5
	Air Compressor	1	8	90
Electrical	Skid Steer	2	6	45
	Scissor Lift	2	8	15
	Generator	1	8	30

Notes:  
 Construction equipment and duration for the NuStar Modification provided by ERM: Environmental Resources Management

**Table 4: NuStar Modification Construction-related Truck Trips**

Proposed Improvement	Off-Site Truck Trips		
	Truck Type	Number of Round Trips During the Construction Period	Round Trip (miles)
Terminal Improvements	Supply trucks	15	15

Notes:  
 Construction related-truck trips for the NuStar Modification provided by ERM: Environmental Resources Management



**Table 5: Approved Eco-Energy Project Construction Equipment and Duration Summary**

Proposed Improvement	Construction Equipment	Construction Duration
Grading	Bulldozers, excavators, over the road dump truck, motor driven scrapers, backhoes, and skid steers. All equipment would be diesel powered, ranging from 90 to 300 horsepower.	2 to 3 months
Railroad bed preparation and rail construction	Rail handler, boom forklift, tamping machine, and regulator. All equipment would be diesel powered, ranging from 250 to 400 horsepower.	4 to 6 months for the initial build, with subsequent minor activities near the end of Project construction
Support building	Portable welders, boom forklift, and skid steer. All equipment would be diesel powered, ranging from 10 to 100 horsepower.	4 months
Fire protection, electrical, and mechanical support equipment components	Portable welders, a boom forklift, and a skid steer. All equipment would be diesel-powered, ranging from 10 to 100 hp.	6 to 9 months
Pipeline	Compact track loaders, medium size backhoes, and welding equipment.	3 months
Pump station	Standard track excavator, concrete forming tools, and concrete trucks.	3 months
Spill control infrastructure	Back hoes, compact track loaders, and tamping equipment.	2 months
Railcar repair building demolition	Bulldozers, excavators, over the road dump truck, motor driven scrapers, backhoes, and skid steers.	2 weeks
<b>Total construction duration</b>		<b>10 to 12 months</b>

*Notes:*

Table 1.3-1 from *Eco-Energy Liquid Bulk Receiving Terminal Final Environmental Impact Report, November 2017*

Construction Emissions

Construction emissions from the proposed NuStar Modification would include combustion criteria pollutants and diesel particulate matter (DPM) from construction equipment, construction truck trips, and worker vehicles. NuStar Modification related construction activities would consist of installing a new, aboveground pipeline connecting an incoming Eco-Energy pipeline to Tanks 8001 and 8002, new truck rack supply pumps, additional piping to convey ethanol from Tanks 8001 and 8002 to the truck rack area, and adding a domed roof on Tank 8002.

The California Emissions Estimator Model (CalEEMod) was used to estimate construction emissions associated with the NuStar Modification. Table 6 below presents the construction related emissions from the NuStar Modification and the Approved Eco-Energy Project as a whole.





**Table 6: Approved Eco-Energy Project and the NuStar Modification - Construction Emissions**

Construction	Annual Emissions (tons)					
	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>x</sub>	CO	ROG (VOC)
Eco-Energy EIR Emission Estimate	0.9	0.6	11.1	0.02	7.18	4.15
<b>NuStar Modification</b>	<b>0.1</b>	<b>0.1</b>	<b>0.8</b>	<b>0.00</b>	<b>1.0</b>	<b>0.1</b>
<b>TOTAL</b>	<b>1.0</b>	<b>0.7</b>	<b>11.9</b>	<b>0.02</b>	<b>8.9</b>	<b>4.3</b>
District Threshold of Significance	15	15	10	27	100	10
<b>Exceed District Threshold?</b>	No	No	<b>Yes</b>	No	No	No
20% Reduced from Eco-Energy EIR MM-AQ-1	1.3	0.8	9.52	0.02	8.9	4.3
Exceed District CEQA Threshold of Significance after Mitigation Measure AQ-1?	No	No	No	No	No	No

**Notes:**

Construction emissions for the Approved Eco-Energy Project obtained from Table 3.1-9 in the Eco-Energy Liquid Bulk Receiving Terminal Final Environmental Impact Report, November 2017.

- The Approved Eco-Energy Project emissions estimated using CalEEMod 2016.3.1.

Construction emissions for the NuStar Modification provided by ERM: Environmental Resources Management

- The NuStar Modification emissions (NuStar) estimated using CalEEMod 2016.3.2.

The Eco-Energy EIR stated construction for the Approved Eco-Energy Project would take 10 to 12 months. As shown in Table 6 above, project-related emissions associated with construction activities for the NuStar Modification would increase the total project emissions and with mitigation would not exceed the District thresholds of significance. Per the Eco-Energy EIR, “Mitigation Measure AQ-1: Direct Construction Emissions Reductions” was added as a measure in order to achieve a 20% NOx reduction from the off-road construction equipment compared to the CARB fleet average.

Eco-Energy Mitigation Measure AQ-1 states:

*“Eco-Energy shall develop a plan demonstrating that the off-road equipment (owned, leased, and subcontractor vehicles greater than 50 hp) to be used in the construction of the proposed project would achieve a project-wide fleet-average of 20% NOx reduction compared to the most recent CARB fleet average.”*



Per the Mitigation Monitoring Program from the Eco-Energy EIR,

*“Eco-Energy will develop a plan to comply prior to construction based on final construction equipment mix. The Port of Stockton will review and approve the plan. Eco-Energy will include requirements in all construction contracts.”*

Measure AQ-1 that is included in the Eco-Energy EIR remains valid for this NuStar Modification and the measure will be identified in the attached Mitigation Monitoring Plan as a condition for NuStar to comply with.

SEIR Mitigation Measure:

*NuStar shall develop a plan demonstrating that the off-road equipment (owned, leased, and subcontractor vehicles greater than 50 hp) to be used in the construction of the proposed project would achieve a project-wide fleet-average of 20% NOx reduction compared to the most recent CARB fleet average [California Environmental Quality Act, SEIR 20190182].*

For the SEIR Mitigation Measure, as discussed above, NuStar will develop a plan to comply prior to construction based on final construction equipment mix. The District will review and approve the plan. NuStar will include requirements in all construction contracts.

Therefore, the District concludes that construction emissions would have a less than significant impact on air quality after mitigation.

### Operational Emissions

*Operational Non-Permitted Activities:* Mobile source operational emissions were already accounted for in the analysis conducted for the Approved Eco-Energy Project. The operational non-permitted emissions from the Approved Eco-Energy Project is below the District’s Significance Threshold for Criteria Pollutants, see Table 7. Therefore, the District concludes that the non-permitted operational emissions would have a less than significant impact on air quality.



**Table 7: Approved Eco-Energy Project and the NuStar Modification related Non-Permitted Operational Emissions – Year 2020**

	Annual Emissions (tons)					
	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>x</sub>	CO	ROG (VOC)
<b>Eco-Energy EIR Emissions Estimates</b>	0.16	0.04	9.05	0.04	3.03	0.16
<b><i>NuStar Modification Non-Permitted Operational Emissions Estimates</i></b>	<b><i>0.0</i></b>	<b><i>0.0</i></b>	<b><i>0.0</i></b>	<b><i>0.0</i></b>	<b><i>0.0</i></b>	<b><i>0.0</i></b>
<b>Total Non-Permitted Operational Emissions</b>	<b>0.16</b>	<b>0.04</b>	<b>9.05</b>	<b>0.04</b>	<b>3.03</b>	<b>1.53</b>
District Threshold of Significance	15	15	10	27	100	10
Exceed District CEQA Threshold of Significance?	No	No	No	No	No	No

*Notes:*

*Operational emissions for Approved Eco-Energy Project obtained from Table 3.1-10, 2020, from the Eco-Energy Liquid Bulk Receiving Terminal Final Environmental Impact Report, November 2017*

*Operational emissions for the NuStar Modification provided by ERM: Environmental Resources Management*

**Operational Permitted Equipment:** NuStar is proposing to make facility modifications for receipt and storage of ethanol that will be received from Eco-Energy at NuStar’s liquid bulk terminal at 2941 Navy Drive at the Port of Stockton, California. Eco-Energy will transfer ethanol to existing tanks at the NuStar terminal through a closed-loop pipeline system. The District has conducted an engineering evaluation for the NuStar Modification’s stationary source emissions and determined that Best Available Control Technology (BACT) is triggered. BACT includes all feasible and cost-effective control measures to reduce potential impacts on air quality resulting from NuStar Modification related stationary source emissions will be applied to the NuStar Modification.

The NuStar Modification for fugitive VOC emissions were calculated using *California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities* (CAPCOA/CARB 1999), Table IV-1b. Fugitive VOCs from ethanol vapors include those from the following NuStar Modification related activities at the NuStar facility (Table 8):

- Tanks during filling, emptying, and standing
- Connection points (valves, flanges, and pumps)
- Vapors from liquids previously held in trucks as the trucks are filled with ethanol
- Loading hoses being disconnected from the trucks after loading is complete



As shown below in Table 8, operational permitted source emissions resulting from the updated analysis under this SEIR would not exceed the District’s thresholds of significance for criteria pollutants. Therefore, the District concludes that project operational permitted activities will have a less than significant impact on air quality.

**Table 8: Approved Eco-Energy Project and the NuStar Modification related (2020) Permitted Operational Emissions**

	Annual Emissions (tons)					
	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>x</sub>	CO	ROG/ VOC*
<b>Approved Eco-Energy Project Emissions Estimates</b>	0.0	0.0	0.0	0.0	0.0	0.2
<b><i>NuStar Modification Permitted Operational Emissions Estimates</i></b>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>(6.1)</i>
<b>Total Permitted Operational Emissions</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>(5.9)</b>
District Threshold of Significance	15	15	10	27	100	10
Exceed District CEQA Threshold of Significance?	No	No	No	No	No	No

Notes:

\*Parentheses indicate a reduction in emissions

As summarized in Tables 7 and 8, project related construction, operational non-permitted source, and operational permitted source emissions from the NuStar Modification and the Approved Eco-Energy Project are below the District’s thresholds of significance. As such, the NuStar Modification does not conflict with the implementation strategy of the District’s air quality plans (2007 Ozone Plan; 2007 PM10 Maintenance Plan and Request for Re-designation; 2008 PM 2.5 Plan; 2012 PM2.5 Plan, 2013 Plan for the Revoked 1-hour Ozone Standard, 2015 Plan for the 1997 PM2.5 Standard; 2016 Plan for the 2008 8-Hour Ozone Standard).

**SEIR Findings: Less than Significant Impact**

The air quality emissions associated with the Approved Eco-Energy Project and the NuStar Modification are below the District’s thresholds of significance for criteria pollutants. This SEIR finds that air quality impacts would be less than significant, as follows:



- 
- Impacts related to construction activities after implementation of the Eco-Energy EIR MM-AQ-1 and SEIR MM-AQ-1 would be less than significant
  - Impacts related to operational activities would be less than significant.

***b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

**SEIR Finding: Less than Significant Impact**

Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project's property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. When combining the daily emissions from the NuStar Modification and the Approved Eco-Energy Project, the highest daily pollutant construction emissions are 52.2 pounds of NOx per day and operational emissions are 49.5 pounds of NOx per day, which are less than the 100 lbs. per day District threshold. Therefore the NuStar Modification and the Approved Eco-Energy Project combined related criteria pollutant emissions will not cause or contribute to an exceedance of either national or state AAQS. Thus, the NuStar Modification is not expected to result in a violation of an air quality standard and the impact would be less than significant for ambient air quality standard purposes.

***c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?***

**SEIR Finding: Less than Significant Impact**

By its very nature, air pollution has a cumulative impact. The District's nonattainment status is a result of past and present development within the San Joaquin Valley Air Basin (SJVAB). Furthermore, attainment of ambient air quality standards can be jeopardized by increasing emissions-generating activities in the region. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development within the San Joaquin Valley Air Basin.

Per CEQA Guidelines §15064(h)(3) a Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan



that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

As discussed above, the NuStar Modification construction-related emissions will not exceed any significance threshold. The NuStar Modification's operational emissions will not exceed any significance thresholds. The Eco-Energy EIR found that both the construction and operational emissions from the Approved Eco-Energy Project would not exceed the significant emissions thresholds, and would not contribute to a cumulatively considerable net increase of non-attainment criteria pollutants. The Eco-Energy EIR showed that estimated emissions for 2020 and future years are below significance thresholds, due to improvements in locomotive and truck emissions based on US EPA and CARB mobile source regulations. Therefore, this SEIR finds that project-related impacts would have a cumulatively less than significant impact on air quality.

**d) *Expose sensitive receptors to substantial pollutant concentrations?***

**SEIR Finding: Less than Significant Impact**

Under the Clean Air Act, toxic air contaminants (TACs) are airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health. Potential health impacts from TACs include long-term health effects such as cancer, birth defects, neurological damage, or genetic damage; or short-term effects such as eye watering, respiratory irritation, throat pain and headaches. TACs may also be referred to as hazardous air pollutants (HAPs). There are currently more than seven hundred (700) substances classified by the US EPA and California Air Resources Board (CARB) as TACs. Air Quality problems occur when sources of TACs and sensitive receptors are located in proximity to one another.

TACs can be separated into carcinogens and non-carcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is expressed as excess cancer cases per one million exposed individuals.

Non-carcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact would occur. These levels are determined on a pollutant-by-pollutant basis. Acute and chronic exposure to non-carcinogens is expressed by using a Hazard Index, which is the ratio of expected exposure levels to health-acceptable exposure levels established by California Air Pollution Control Officers (CAPCOA) in the *CAPCOA Prioritization Guidelines*.

- Carcinogens: Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds twenty (20) in one million.
- Non-Carcinogens: Ground Level concentrations of non-carcinogenic TACs would result in a Hazard Index greater than one (1) for the MEI.





Sensitive receptors are defined as infants and children, the elderly, the chronically ill, and any other members of the general population who are more susceptible to the effects of exposure to environmental contaminants than the population at large. Additionally, the District includes in the definition of sensitive receptors locations occupied by groups of individuals that may be more susceptible than the general population to health risks from a chemical exposure and therefore include schools (public and private), day-care facilities, convalescent homes, parks, and hospitals.

Worksite receptors are also identified in the project. Work-site receptors are typically assessed at the location of a physical building; however, adjacent outdoor worksites at the Port of Stockton is comprised of many prolonged outdoor work scenarios; therefore placement of receptors can be also be found in outdoor work yards.

Adverse health effects are expressed in terms of cancer or non-cancer health risks. Cancer risk is typically reported as “lifetime cancer risk,” which is the estimated maximum increase in the risk of developing cancer caused by long-term exposure to a pollutant identified as being a carcinogen by the California Office of Environmental Health Hazard Assessment (OEHHA). Non-cancer risk is typically reported as a Hazard Index (HI). The HI is calculated for each target organ (as determined by OEHHA) as a fraction of the maximum acceptable exposure level or reference exposure level for an individual pollutant.

The Eco-Energy EIR found that the Approved Eco-Energy Project would result in a less-than-significant cancer risk, chronic health hazard, and acute health hazard at the maximally affected individual receptors. The Eco-Energy EIR further concluded that impacts from the Approved Eco-Energy Project would be less than significant.

The District performed an HRA for this NuStar Modification. The HRA evaluated the transfer of ethanol at the NuStar facility through a closed-loop pipeline system that originates at the Eco-Energy facility and with the ethanol being stored in existing tanks at the NuStar facility. The results from the HRA show that the acute and chronic indices are below 1.0 and the cancer risk associated with the NuStar Modification is less than 20 in a million.



**Table 9. Approved Eco-Energy Project and the NuStar Modification Maximum Cancer Risk and Hazards**

Health Impacts	Increased Cancer Risk	Maximum Hazard Index (Chronic)	Maximum Hazard Index (Acute)
<b>Eco-Energy EIR</b>	6.86 in 1 million	0.002	0.68
<b>NuStar Modification</b>	0.40 in 1 million	0.02	0.02
<b>Total</b>	7.26 in 1 million	0.022	0.70
<b>District Significant Threshold</b>	20.0 in 1 million	1.0	1.0
Exceed District CEQA Threshold of Significance?	No	No	No

*Notes:*

*Cancer Risk and Hazards for Approved Eco-Energy Project obtained from Table 3.1-12, from the Eco-Energy Liquid Bulk Receiving Terminal Final Environmental Impact Report, November 2017*

As shown in Table 9, the Health Risk Assessment demonstrates that the total health impact from the NuStar Modification and the Approved Eco-Energy Project combined will be below the District’s Significant Threshold. The acute and chronic indices are below 1.0 and the cancer risk is less than 20 in a million for the NuStar Modification and the Approved Eco-Energy Project combined. Therefore, this SEIR finds that project-related impacts would be less than significant.

**e) Create objectionable odors affecting a substantial number of people?**

**SEIR Finding: Less than Significant Impact**

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the District.

During construction, diesel exhaust produced by off-road construction equipment could generate odors; however, several pieces of construction equipment would need to operate concurrently in a relatively small area to generate a constant plume of diesel exhaust that would cause objectionable odors for a substantial number of people. These circumstances would not occur as part of the proposed Project because construction would occur over a broad area and construction equipment would not all operate at the same time.

During operation, diesel exhaust produced by trucks could generate odors. However, the majority of the operation would occur within the confines of the Port. Odors from the product unloading area are not expected to be significant because of the low





amount of fugitive emissions that would be generated and because the nearest receptor is 4,500 feet away from the product unloading area from residences.

The District's *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* defines a significant odor impact as either:

- More than one (1) confirmed complaint per year averaged over a three (3) year period, or
- Three (3) confirmed complaints per year averaged over a three (3) year period.

The District searched its Compliance Database for the Eco-Energy facility and the NuStar facility. There have been zero complaints for these facilities during the three year period from 2017 through 2019 and zero complaints year to date for 2020.

Operational emissions from the product unloading area are not expected to be significant because of the low amount of fugitive emissions that would be generated and the distance (4,500 feet) of the product unloading area from residences.

The District concludes that there is no substantial evidence of record to support a conclusion that the Approved Eco-Energy Project, either on its own or as modified by the NuStar ATC application, would create objectionable odors affecting a substantial number of people. Therefore, this SEIR finds that project-related impacts would be less than significant on odors.

## II. ENERGY

<b>II. Energy</b> <b>Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			✓	
b) Conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency?				✓

This section describes the existing conditions and potential effects on energy that may occur with implementation of the NuStar Modification and presents information on energy as required by CEQA guidelines.



## **Regulations**

### California 2008 Energy Action Plan Update

The California Public Utilities Commission, the California Energy Commission, and the California Power Authority developed the California Energy Action Plan. It identifies how California will ensure that its energy is affordable, environmentally friendly, and up-to-date with the best technology. The main factors evaluated within the plan include energy efficiency, demand response, renewable energy, reliability, market structure, research, development, and climate change (State of California 2008).

### Executive Order S-06-06

Executive Order (EO) S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The Executive Order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The Executive Order also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- increase environmentally- and economically-sustainable energy production from organic waste;
- encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- create jobs and stimulate economic development, especially in rural regions of the state; and
- reduce fire danger, improve air and water quality, and reduce waste.

As of 2015, 3.2 percent of the total electricity system power in California was derived from biofuels.

### Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable



Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

#### Executive Order B-30-15

On April 20, 2015, Executive Order (EO) B-30-15 was signed into law to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (Assembly Bill 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

#### Senate Bill 32 and Assembly Bill 197

In August 2016, SB 32 and AB 197 were signed into law, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

#### San Joaquin General Plan 2035

General Plan 2035 establishes the vision for the County's future development and a strategy on how to accomplish that vision. The plan addresses issues faced by the county as it continues to grow, in order to increase the general well-being of the community through the county's physical, economic, and social development. Within the plan, community development goals are to encourage the industrial development of energy and renewable energy for the county (San Joaquin County 2017)



- a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

**SEIR Finding: Less than Significant Impact**

Table 3 and Table 5 summarize the construction equipment and duration of use for the NuStar Modification and the Approved Eco-Energy Project. The energy demand associated with construction would primarily involve fuel usage by construction equipment and vehicles and would not require any unusual or excessively inefficient construction equipment or practices compared to projects of similar type and size. Energy consumption during construction would be limited by general Best Management Practices, for both Eco-Energy and NuStar, such as shutting off equipment and vehicles when not in use or limiting idling times, properly maintaining construction equipment in accordance with manufacturer specifications, and conducting route inspections of equipment and vehicles to identify any wasteful leakage of fuel or oil.

In addition, as part of reducing impacts from construction for air quality purposes, cleaner construction equipment would be utilized in order to provide additional reductions; hence providing for efficient use of energy during construction.

Regarding energy use during operation, the NuStar Modification and the Approved Eco-Energy Project purpose is to increase efficiency related to transport and handling of liquid bulk petroleum product from inland sources to the Port of Stockton, which will also have an effect of increasing the facilities energy efficiency. An example of this energy efficiency for the NuStar Modification and the Approved Eco-Energy would come with respect to product arriving at the NuStar facility from the Eco-Energy facility by way of the close loop pipeline. This would eliminate the need for the transportation of ethanol by truck from the Eco-Energy facility to the NuStar facility.

The District concludes that the NuStar Modification and the Approved Eco-Energy Project would not be wasteful, inefficient, or unnecessarily consume energy resources, during construction or operation. Therefore, this SEIR finds that project-related impacts would be less-than-significant on energy consumption.

- b) *Would the project conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency?***

**SEIR Finding: No Impact**

The goal of the Approved Eco-Energy Project and of the NuStar Modification is to provide storage and transportation for fuels that meet the federal, state, and local standards for low carbon intensity fuel. The NuStar Modification and the Approved Eco-Energy Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.



The District concludes that there is no substantial evidence of record to support a conclusion that the NuStar Modification and the Approved Eco-Energy Project would conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency. Therefore, the Eco-Energy EIR did not specifically address impacts to energy associated with the Approved Eco-Energy Project and the NuStar Modification. This SEIR finds that there would be no impact on a state or local plan for renewable energy or energy efficiency.

### III. GREENHOUSE GAS EMISSIONS

<b>III. Greenhouse Gas Emissions</b>  <b>Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Greenhouse Gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth’s atmosphere. There are no “attainment” standards established by the Federal or State government for GHGs. In fact, GHGs are not generally thought of as traditional air pollutants because GHGs, and their impacts, are global in nature, while traditional “criteria” air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through natural processes. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere because of human activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated carbons. Additional information on GHG and global climate change can be found in the District staff report titled: *Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act*.

#### Assembly Bill 32 (AB 32)

Assembly Bill 32 (California Global Warming Solutions Act of 2006) is a key piece of California’s effort to reduce its GHG emissions. AB 32 was adopted establishing a cap



on statewide greenhouse gas emissions and sets forth the regulatory framework to achieve the corresponding reduction in statewide emissions levels. AB 32 requires CARB to establish regulations designed to reduce California's GHG emissions to 1990 levels by 2020. In executing its legislative mandate under AB 32, CARB developed a Scoping Plan that contains the main strategies California will use to reduce GHG from Business-as-Usual (BAU) emissions projected from 2020 levels back down to 1990 levels. BAU is the projected emissions caused by growth, without any GHG reduction measures. CARB determined that a 29% reduction from BAU is necessary to achieve the 1990 GHG emissions level.

On December 11, 2008, CARB adopted its AB 32 Scoping Plan, setting a framework for future regulatory action on how California will achieve the goal of reducing GHG emissions to 1990 levels. The "First Update to the Climate Change Scoping Plan" was approved by the Board on May 22, 2014.

The AB 32 Scoping Plan identifies a Cap and Trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. The Cap and Trade program is implemented by the California Air Resources Board (CARB) and caps GHG emissions from the industrial, utility, and transportation fuels sectors-which account for roughly 80% of the state's GHG emissions. As of 2015-2017, AB 32 includes distributors of transportation fuels (including gasoline and diesel).

#### Executive Order B-30-15

On April 20, 2015, Executive Order (EO) B-30-15 was signed into law to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (Assembly Bill 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

#### Senate Bill 32 and Assembly Bill 197

In August 2016, SB 32 and AB 197 were signed into law, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15





for 2030, which set the next interim step in the State’s continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California’s dependency of fossil fuels and making land use development and transportation systems more energy efficient.

Additionally, there are several other regulations for reducing GHGs exist at the federal, state, and local levels. The two most applicable to the NuStar Modification are as follows:

- **Governor’s Executive Order S-01-07 (January 2007) and Low Carbon Fuel Standards (LCFS) (approved April 2009, effective April 2010).** EO S-01-07 was enacted by then-Governor Schwarzenegger on 18 January 2007. The executive order mandated that a statewide goal be established to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California (CARB 2016). The NuStar Modification would help achieve this goal by bringing in additional RD.
- **City of Stockton General Plan.** The City updated and adopted its 2040 General Plan on 4 December 2018, which includes new GHG measures. The updated plan included the following measure that is applicable to the NuStar Modification:
  - Policy CH-5.2: Expand opportunities for recycling, reuse of materials, and waste reduction. Action CH-5.2B: Continue to require recycling in private and public operations, including construction/demolition debris.

#### District CEQA Policy

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. On December 17, 2009, the District adopted the policy “*District Policy (APR 2005) – Addressing GHG Emissions Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*” and approved the District’s guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. The policy applies to all District permitting projects that have an increase in GHG emissions, regardless of the magnitude of the increase. Under this policy, the District’s determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change.

In addition, the District also established the policy “*APR 2025 - CEQA Determinations of Significance for Projects Subject to ARB’s GHG Cap-and-Trade Regulation*”. The AB 32 Scoping Plan identifies a Cap-and-Trade program as one of the strategies California will employ to reduce the greenhouse gas (GHG) emissions that cause climate change. The



Cap-and-Trade program is implemented by the California Air Resources Board and caps GHG emissions from the industrial, utility, and transportation fuels sectors – which account the majority of the state’s GHG emissions.

The program works by establishing a hard cap on about 85 percent of total statewide greenhouse gas emissions. The cap level is set to ensure California complies with AB emission reduction target of returning the GHG emission levels to the required levels per the Scoping Plan.

The scope of GHG emission sources subject to Cap-and-Trade includes:

- All electricity generated and imported into California. The first deliverer of electricity into the state is the capped entity (the one that will have to purchase and surrender allowances).
- Large industrial facilities emitting more than 25,000 metric tons of GHG pollution/year. Examples include oil refineries and cement manufacturers.
- Distributors of transportation fuels (including gasoline and diesel), natural gas, and other fuels. The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station).

Of specific relevance to Cap-and-Trade is the provision that: “Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emissions. In summary, all GHG emission increases resulting from the combustion of any fuel produced, imported and/or delivered in California are mitigated under Cap-and-Trade, either directly or indirectly by facilities identified above. The District finds that, through compliance with the Cap-and-Trade regulation, project-specific GHG emissions that are covered by the regulation will be fully mitigated.

***a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

**SEIR Finding: Less than Significant Impact**

For the NuStar Modification the only new GHG emissions that were not accounted for in the Approved Eco-Energy Project would be emitted only during the construction phase, and no GHG emissions are associated with the operation of the proposed NuStar Modification. The construction phase includes construction equipment, worker vehicle trips, and energy used onsite. Construction is expected to take approximately 7 months. As discussed in the Air Quality section, CalEEMod was used to calculate construction emissions. These emissions will be amortized over the lifetime of the project, 30 year lease (see Table 7).





Table 7 below shows the Approved Eco-Energy Project and the NuStar Modification, GHG emissions for construction as estimated using CalEEMod. Construction emissions would occur in 2020 and are amortized over the 30 year lease with the Port of Stockton.

**Table 7: Approved Eco-Energy Project and the NuStar Modification Construction GHG Emissions (metric tons of CO2-equivalent per year) (mty)**

Construction Emission Source	CO2 Emissions (mty)
NuStar Modification	159
Approved Eco-Energy Project	1,684
<b>Total Annual Amortized Construction Emissions</b>	<b>62</b>

*Notes:*

*Construction emissions are emissions that would occur in 2020.*

*Construction emissions amortized over 30 years minus baseline emissions.*

*Construction emissions for Approved Eco-Energy Project obtained from Appendix D, CalEEMod Construction Emission Calculations, from the Eco-Energy Liquid Bulk Receiving Terminal Draft Environmental Impact Report, June 2017*

- o *The Approved Eco-Energy Project emissions estimated using CalEEMod 2016.3.1.*

*Construction emissions for the NuStar Modification provided by ERM: Environmental Resources Management*

- o *The NuStar Modification emissions (NuStar) estimated using CalEEMod 2016.3.2.*

As discussed above, AB32 includes distributors of transportation fuels (including gasoline and diesel) in the Cap-and-Trade regulation. This accounts for combustion of fossil fuels including transportation fuels used in California (on and off road including locomotives). The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station). Therefore, mobile sources, and off-road sources associated with construction for the NuStar Modification are covered under Cap-and-Trade regulation.

Additionally, the Approved Eco-Energy Project, as modified by the NuStar ATC application, would follow guidelines set in the 2035 San Joaquin County General Plan, which has established a GHG reduction target for 2020 and goals for 2035 and 2050 in order to be consistent with State statutes established by AB 32 and State objectives stated in Executive Order S-3-05. The 2020 target establishes a firm, near-term standard that must be met of 15 percent below 2007 levels by 2020, following guidance from the CARB. This reduction is deemed by CARB to be consistent with the statewide AB 32 goal of reducing emissions to 1990 levels (San Joaquin County 2014).

Furthermore, as discussed above, the NuStar Modification would also follow guidelines set by the “Governor’s Executive Order S-01-07 (January 2007) and Low Carbon Fuel Standards”, and the City of Stockton’s General Plan Policy CH-5.2. The NuStar Modification would also be consistent with District CEQA policy.



As such, the NuStar Modification and the Approved Eco-Energy Project would not conflict with an applicable plan, policy, or regulation for the purpose of reducing greenhouse gas emissions. Therefore, this SEIR finds that project-related impacts would be less than significant on applicable GHG plans, policies or regulations.

***b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

**SEIR Finding: Less than Significant Impact**

The NuStar Modification involves the receipt, storage, and distribution of ethanol, an additive to reduce the carbon intensity of gasoline. As such, the NuStar Modification is consistent with plans and policies in place to reduce climate change from GHG emissions. The NuStar Modification would likely reduce region-wide GHG emissions by increasing the supply of LCFS-compliant fuels within California to meet carbon intensity goals for transportation fuels, which is consistent with state policies.

In addition, as stated in the Eco-Energy EIR, the Approved Eco-Energy Project does all of the above to reduce climate change from GHG emissions.

As such, the Approved Eco-Energy Project, as modified by the NuStar ATC application, would not conflict with an applicable plan, policy, or regulation for the purpose of reducing greenhouse gas emissions. Therefore, this SEIR finds that project-related impacts would be less than significant on applicable GHG plans, policies or regulations.



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## **H. APPENDICES**

Appendix A. Acronyms and Abbreviations

Appendix B. Mitigation Monitoring and Reporting Program

Appendix C. CalEEMod Construction Emission Results for NuStar Modification





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## Appendix A. Acronyms and Abbreviations

AAQA	Ambient Air Quality Analysis
AAQS	Ambient Air Quality Standards
AB 2588	Assembly Bill 2588 – Air Toxics “Hot Spots” Information and Assessment Act
AB 32	Assembly Bill 32 – California Global Warming Solutions Act of 2006
ATC	Authority to Construct
BACT	Best Available Control Technology
BAU	Business as Usual
BMP	Best Management Practice
BPS	Best Performance Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH <sub>4</sub>	Methane
CMP	Conservation Management Practices Plan
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide equivalent
COG	Council of Governments
DEIR	Draft Environmental Impact Report
District	San Joaquin Valley Unified Air Pollution Control District
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
ERG	Environmental Review Guidelines
FED	Functionally Equivalent Document
FEIR	Final Environmental Impact Report
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HRA	Health Risk Assessment
LCFS	Low Carbon Fuel Standard
N <sub>2</sub> O	Nitrous Oxide
NOP	Notice of Preparation
NO <sub>x</sub>	Oxides of Nitrogen
NSR	New Source Review
NuStar	NuStar Terminals Operations Partnership, LP
PM <sub>10</sub>	Particulate Matter 10 microns in diameter
PM <sub>2.5</sub>	Particulate Matter 2.5 microns in diameter
ROG	Reactive Organic Gases

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SEIR	Supplemental Environmental Impact Report
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>x</sub>	Sulfur Oxides
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminant
TPY	Tons Per Year
US EPA	US Environmental Protection Agency
VOC	Volatile Organic Compound

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## Appendix B. Mitigation Monitoring and Reporting Program

Impact	Significance Prior to Mitigation	Measure Number	Mitigation Measure	Enforcement Agency	Significance After Mitigation
Project construction emissions may exceed the District's thresholds of significance when combined with the Approved Eco-Energy Project.	Potentially Significant	SEIR AQ-1	<p>SEIR Mitigation Measure AQ-1:</p> <p>NuStar shall develop a plan demonstrating that the off-road equipment (owned, leased, and subcontractor vehicles greater than 50 hp) to be used in the construction of the proposed project would achieve a project-wide fleet-average of 20% NO<sub>x</sub> reduction compared to the most recent CARB fleet average.</p> <p>For the SEIR Mitigation Measure AQ-1:</p> <p>NuStar will develop a plan to comply prior to construction based on final construction equipment mix. The District will review and approve the plan. NuStar will include requirements in all construction contracts.</p>	San Joaquin Valley Air Pollution Control District	Less than Significant



## **Appendix C. CalEEMod Construction Emission Results for NuStar Modification**

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Stockton NuStar Ethanol Project - San Joaquin Valley Unified APCD Air District, Annual

**Stockton NuStar Ethanol Project**  
**San Joaquin Valley Unified APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	155.00	1000sqft	3.56	155,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	2			<b>Operational Year</b>	2021
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - Provided by NuStar.

Off-road Equipment - Provided by NuStar

Off-road Equipment - Provided by NuStar

Off-road Equipment - Provided by NuStar

Trips and VMT - Concrete truck. Supply trucks.

Grading -



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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	87.00
tblConstructionPhase	NumDays	230.00	65.00
tblConstructionPhase	NumDays	8.00	40.00
tblConstructionPhase	PhaseEndDate	1/27/2021	8/25/2020
tblConstructionPhase	PhaseEndDate	12/15/2021	9/29/2020
tblConstructionPhase	PhaseEndDate	3/11/2020	4/24/2020
tblConstructionPhase	PhaseStartDate	3/12/2020	4/27/2020
tblConstructionPhase	PhaseStartDate	1/28/2021	7/1/2020
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Building Construction1
tblOffRoadEquipment	PhaseName		Building Construction1
tblOffRoadEquipment	PhaseName		Building Construction2
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	VendorTripLength	7.30	50.00

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tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripNumber	25.00	1.00
tblTripsAndVMT	VendorTripNumber	25.00	1.00

**2.0 Emissions Summary**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-2-2020	6-1-2020	0.3028	0.3028
2	6-2-2020	9-1-2020	0.5830	0.5830
3	9-2-2020	9-30-2020	0.0531	0.0531
		Highest	0.5830	0.5830

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7133	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Energy	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	535.2000	535.2000	0.0202	6.3900e-003	537.6092
Mobile	0.0879	0.9496	0.9158	4.3200e-003	0.2589	3.9700e-003	0.2628	0.0696	3.7500e-003	0.0734	0.0000	400.7036	400.7036	0.0265	0.0000	401.3650
Waste						0.0000	0.0000		0.0000	0.0000	39.0149	0.0000	39.0149	2.3057	0.0000	96.6577
Water						0.0000	0.0000		0.0000	0.0000	11.3716	56.4224	67.7940	1.1705	0.0281	105.4326
<b>Total</b>	<b>0.8167</b>	<b>1.0912</b>	<b>1.0362</b>	<b>5.1700e-003</b>	<b>0.2589</b>	<b>0.0147</b>	<b>0.2736</b>	<b>0.0696</b>	<b>0.0145</b>	<b>0.0842</b>	<b>50.3864</b>	<b>992.3288</b>	<b>1,042.7153</b>	<b>3.5229</b>	<b>0.0345</b>	<b>1,141.0675</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7133	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Energy	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	535.2000	535.2000	0.0202	6.3900e-003	537.6092
Mobile	0.0879	0.9496	0.9158	4.3200e-003	0.2589	3.9700e-003	0.2628	0.0696	3.7500e-003	0.0734	0.0000	400.7036	400.7036	0.0265	0.0000	401.3650
Waste						0.0000	0.0000		0.0000	0.0000	39.0149	0.0000	39.0149	2.3057	0.0000	96.6577
Water						0.0000	0.0000		0.0000	0.0000	11.3716	56.4224	67.7940	1.1705	0.0281	105.4326
<b>Total</b>	<b>0.8167</b>	<b>1.0912</b>	<b>1.0362</b>	<b>5.1700e-003</b>	<b>0.2589</b>	<b>0.0147</b>	<b>0.2736</b>	<b>0.0696</b>	<b>0.0145</b>	<b>0.0842</b>	<b>50.3864</b>	<b>992.3288</b>	<b>1,042.7153</b>	<b>3.5229</b>	<b>0.0345</b>	<b>1,141.0675</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/2/2020	4/24/2020	5	40	Civil
2	Building Construction1	Building Construction	4/27/2020	8/25/2020	5	87	Mechanical
3	Building Construction2	Building Construction	7/1/2020	9/29/2020	5	65	Electrical



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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 38.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	6.00	158	0.38
Grading	Skid Steer Loaders	2	6.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction1	Cranes	1	4.00	231	0.29
Building Construction1	Excavators	1	6.00	158	0.38
Building Construction1	Forklifts	2	6.00	89	0.20
Building Construction1	Skid Steer Loaders	2	6.00	65	0.37
Building Construction1	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction1	Welders	2	8.00	46	0.45
Building Construction2	Aerial Lifts	2	3.00	63	0.31
Building Construction2	Generator Sets	1	8.00	84	0.74

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction1	14	65.00	1.00	0.00	10.80	50.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction2	3	65.00	1.00	0.00	10.80	50.00	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

**3.2 Grading - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	2.2000e-003	0.0000	2.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2100e-003	0.0996	0.1249	1.9000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	16.3460	16.3460	5.2900e-003	0.0000	16.4782
<b>Total</b>	<b>9.2100e-003</b>	<b>0.0996</b>	<b>0.1249</b>	<b>1.9000e-004</b>	<b>0.0204</b>	<b>5.1300e-003</b>	<b>0.0255</b>	<b>2.2000e-003</b>	<b>4.7200e-003</b>	<b>6.9200e-003</b>	<b>0.0000</b>	<b>16.3460</b>	<b>16.3460</b>	<b>5.2900e-003</b>	<b>0.0000</b>	<b>16.4782</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.7000e-004	5.8300e-003	2.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4359	1.4359	4.0000e-005	0.0000	1.4369
<b>Total</b>	<b>8.5000e-004</b>	<b>5.7000e-004</b>	<b>5.8300e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>4.2000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.4359</b>	<b>1.4359</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.4369</b>

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**3.2 Grading - 2020**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	2.2000e-003	0.0000	2.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2100e-003	0.0996	0.1249	1.9000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	16.3460	16.3460	5.2900e-003	0.0000	16.4781
<b>Total</b>	<b>9.2100e-003</b>	<b>0.0996</b>	<b>0.1249</b>	<b>1.9000e-004</b>	<b>0.0204</b>	<b>5.1300e-003</b>	<b>0.0255</b>	<b>2.2000e-003</b>	<b>4.7200e-003</b>	<b>6.9200e-003</b>	<b>0.0000</b>	<b>16.3460</b>	<b>16.3460</b>	<b>5.2900e-003</b>	<b>0.0000</b>	<b>16.4781</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.7000e-004	5.8300e-003	2.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4359	1.4359	4.0000e-005	0.0000	1.4369
<b>Total</b>	<b>8.5000e-004</b>	<b>5.7000e-004</b>	<b>5.8300e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>4.2000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.4359</b>	<b>1.4359</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.4369</b>

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**3.3 Building Construction1 - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.5554	0.5484	8.5000e-004		0.0299	0.0299		0.0281	0.0281	0.0000	71.7159	71.7159	0.0203	0.0000	72.2238
<b>Total</b>	<b>0.0691</b>	<b>0.5554</b>	<b>0.5484</b>	<b>8.5000e-004</b>		<b>0.0299</b>	<b>0.0299</b>		<b>0.0281</b>	<b>0.0281</b>	<b>0.0000</b>	<b>71.7159</b>	<b>71.7159</b>	<b>0.0203</b>	<b>0.0000</b>	<b>72.2238</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0188	3.7800e-003	7.0000e-005	1.9700e-003	1.9000e-004	2.1600e-003	5.7000e-004	1.8000e-004	7.5000e-004	0.0000	6.3903	6.3903	1.4000e-004	0.0000	6.3937
Worker	0.0120	8.1100e-003	0.0825	2.2000e-004	0.0226	1.6000e-004	0.0228	6.0100e-003	1.5000e-004	6.1600e-003	0.0000	20.2995	20.2995	5.8000e-004	0.0000	20.3140
<b>Total</b>	<b>0.0127</b>	<b>0.0269</b>	<b>0.0862</b>	<b>2.9000e-004</b>	<b>0.0246</b>	<b>3.5000e-004</b>	<b>0.0249</b>	<b>6.5800e-003</b>	<b>3.3000e-004</b>	<b>6.9100e-003</b>	<b>0.0000</b>	<b>26.6898</b>	<b>26.6898</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>26.7077</b>

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**3.3 Building Construction1 - 2020**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.5554	0.5484	8.5000e-004		0.0299	0.0299		0.0281	0.0281	0.0000	71.7158	71.7158	0.0203	0.0000	72.2237
<b>Total</b>	<b>0.0691</b>	<b>0.5554</b>	<b>0.5484</b>	<b>8.5000e-004</b>		<b>0.0299</b>	<b>0.0299</b>		<b>0.0281</b>	<b>0.0281</b>	<b>0.0000</b>	<b>71.7158</b>	<b>71.7158</b>	<b>0.0203</b>	<b>0.0000</b>	<b>72.2237</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0188	3.7800e-003	7.0000e-005	1.9700e-003	1.9000e-004	2.1600e-003	5.7000e-004	1.8000e-004	7.5000e-004	0.0000	6.3903	6.3903	1.4000e-004	0.0000	6.3937
Worker	0.0120	8.1100e-003	0.0825	2.2000e-004	0.0226	1.6000e-004	0.0228	6.0100e-003	1.5000e-004	6.1600e-003	0.0000	20.2995	20.2995	5.8000e-004	0.0000	20.3140
<b>Total</b>	<b>0.0127</b>	<b>0.0269</b>	<b>0.0862</b>	<b>2.9000e-004</b>	<b>0.0246</b>	<b>3.5000e-004</b>	<b>0.0249</b>	<b>6.5800e-003</b>	<b>3.3000e-004</b>	<b>6.9100e-003</b>	<b>0.0000</b>	<b>26.6898</b>	<b>26.6898</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>26.7077</b>

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**3.4 Building Construction2 - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0139	0.1287	0.1471	2.5000e-004		6.7300e-003	6.7300e-003		6.7000e-003	6.7000e-003	0.0000	21.9652	21.9652	2.2000e-003	0.0000	22.0201
<b>Total</b>	<b>0.0139</b>	<b>0.1287</b>	<b>0.1471</b>	<b>2.5000e-004</b>		<b>6.7300e-003</b>	<b>6.7300e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>	<b>0.0000</b>	<b>21.9652</b>	<b>21.9652</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>22.0201</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0140	2.8300e-003	5.0000e-005	1.4700e-003	1.4000e-004	1.6100e-003	4.2000e-004	1.3000e-004	5.6000e-004	0.0000	4.7743	4.7743	1.0000e-004	0.0000	4.7769
Worker	8.9300e-003	6.0600e-003	0.0616	1.7000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6000e-003	0.0000	15.1663	15.1663	4.3000e-004	0.0000	15.1772
<b>Total</b>	<b>9.5200e-003</b>	<b>0.0201</b>	<b>0.0644</b>	<b>2.2000e-004</b>	<b>0.0184</b>	<b>2.6000e-004</b>	<b>0.0186</b>	<b>4.9100e-003</b>	<b>2.4000e-004</b>	<b>5.1600e-003</b>	<b>0.0000</b>	<b>19.9406</b>	<b>19.9406</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>19.9540</b>



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**3.4 Building Construction2 - 2020**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0139	0.1287	0.1471	2.5000e-004		6.7300e-003	6.7300e-003		6.7000e-003	6.7000e-003	0.0000	21.9652	21.9652	2.2000e-003	0.0000	22.0201
<b>Total</b>	<b>0.0139</b>	<b>0.1287</b>	<b>0.1471</b>	<b>2.5000e-004</b>		<b>6.7300e-003</b>	<b>6.7300e-003</b>		<b>6.7000e-003</b>	<b>6.7000e-003</b>	<b>0.0000</b>	<b>21.9652</b>	<b>21.9652</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>22.0201</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0140	2.8300e-003	5.0000e-005	1.4700e-003	1.4000e-004	1.6100e-003	4.2000e-004	1.3000e-004	5.6000e-004	0.0000	4.7743	4.7743	1.0000e-004	0.0000	4.7769
Worker	8.9300e-003	6.0600e-003	0.0616	1.7000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6000e-003	0.0000	15.1663	15.1663	4.3000e-004	0.0000	15.1772
<b>Total</b>	<b>9.5200e-003</b>	<b>0.0201</b>	<b>0.0644</b>	<b>2.2000e-004</b>	<b>0.0184</b>	<b>2.6000e-004</b>	<b>0.0186</b>	<b>4.9100e-003</b>	<b>2.4000e-004</b>	<b>5.1600e-003</b>	<b>0.0000</b>	<b>19.9406</b>	<b>19.9406</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>19.9540</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0879	0.9496	0.9158	4.3200e-003	0.2589	3.9700e-003	0.2628	0.0696	3.7500e-003	0.0734	0.0000	400.7036	400.7036	0.0265	0.0000	401.3650
Unmitigated	0.0879	0.9496	0.9158	4.3200e-003	0.2589	3.9700e-003	0.2628	0.0696	3.7500e-003	0.0734	0.0000	400.7036	400.7036	0.0265	0.0000	401.3650

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	232.50	232.50	232.50	678,786	678,786
Total	232.50	232.50	232.50	678,786	678,786

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.506092	0.032602	0.169295	0.124521	0.019914	0.005374	0.021664	0.110051	0.001797	0.001623	0.005307	0.000969	0.000792

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	381.0213	381.0213	0.0172	3.5600e-003	382.5143
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	381.0213	381.0213	0.0172	3.5600e-003	382.5143
NaturalGas Mitigated	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.1787	154.1787	2.9600e-003	2.8300e-003	155.0949
NaturalGas Unmitigated	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.1787	154.1787	2.9600e-003	2.8300e-003	155.0949

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	2.8892e+006	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.1787	154.1787	2.9600e-003	2.8300e-003	155.0949
<b>Total</b>		<b>0.0156</b>	<b>0.1416</b>	<b>0.1190</b>	<b>8.5000e-004</b>		<b>0.0108</b>	<b>0.0108</b>		<b>0.0108</b>	<b>0.0108</b>	<b>0.0000</b>	<b>154.1787</b>	<b>154.1787</b>	<b>2.9600e-003</b>	<b>2.8300e-003</b>	<b>155.0949</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	2.8892e+006	0.0156	0.1416	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.1787	154.1787	2.9600e-003	2.8300e-003	155.0949
<b>Total</b>		<b>0.0156</b>	<b>0.1416</b>	<b>0.1190</b>	<b>8.5000e-004</b>		<b>0.0108</b>	<b>0.0108</b>		<b>0.0108</b>	<b>0.0108</b>	<b>0.0000</b>	<b>154.1787</b>	<b>154.1787</b>	<b>2.9600e-003</b>	<b>2.8300e-003</b>	<b>155.0949</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.30975e+006	381.0213	0.0172	3.5600e-003	382.5143
<b>Total</b>		<b>381.0213</b>	<b>0.0172</b>	<b>3.5600e-003</b>	<b>382.5143</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.30975e+006	381.0213	0.0172	3.5600e-003	382.5143
<b>Total</b>		<b>381.0213</b>	<b>0.0172</b>	<b>3.5600e-003</b>	<b>382.5143</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7133	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
Unmitigated	0.7133	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1078					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6054					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
<b>Total</b>	<b>0.7132</b>	<b>1.0000e-005</b>	<b>1.4300e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.7700e-003</b>	<b>2.7700e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.9500e-003</b>



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**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1078					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6054					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7700e-003	2.7700e-003	1.0000e-005	0.0000	2.9500e-003
<b>Total</b>	<b>0.7132</b>	<b>1.0000e-005</b>	<b>1.4300e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.7700e-003</b>	<b>2.7700e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.9500e-003</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	67.7940	1.1705	0.0281	105.4326
Unmitigated	67.7940	1.1705	0.0281	105.4326

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	35.8438 / 0	67.7940	1.1705	0.0281	105.4326
<b>Total</b>		<b>67.7940</b>	<b>1.1705</b>	<b>0.0281</b>	<b>105.4326</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	35.8438 / 0	67.7940	1.1705	0.0281	105.4326
<b>Total</b>		<b>67.7940</b>	<b>1.1705</b>	<b>0.0281</b>	<b>105.4326</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	39.0149	2.3057	0.0000	96.6577
Unmitigated	39.0149	2.3057	0.0000	96.6577

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	192.2	39.0149	2.3057	0.0000	96.6577
<b>Total</b>		<b>39.0149</b>	<b>2.3057</b>	<b>0.0000</b>	<b>96.6577</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	192.2	39.0149	2.3057	0.0000	96.6577
<b>Total</b>		<b>39.0149</b>	<b>2.3057</b>	<b>0.0000</b>	<b>96.6577</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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