EXHIBIT 1

ROBERTSON - BRYAN, INC.
Solutions for Progress

ASCENT ENVIRONMENTAL

City of Stockton
Regional Wastewater Control Facility Modifications Project

Final Environmental Impact Report

State Clearinghouse No. 2018092017

PREPARED FOR:
City of Stockton
Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95206

January 2019

City of Stockton Regional Wastewater Control Facility Modifications Project

Final Environmental Impact Report

State Clearinghouse No. 2018092017

PREPARED FOR:

City of Stockton Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95206

CONTACT:

Juan Chavez, Project Manager
Telephone: (209) 937-5428
juan.chavez@stocktonca.gov

PREPARED BY:

Robertson–Bryan, Inc.
9888 Kent Street
Elk Grove, CA 95624

Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, CA 95814

CONTACT:

Michael Bryan, Ph.D., Principal
Robertson-Bryan, Inc.
Telephone: (916) 714-1802
Fax: (916) 714-1804
bryan@robertson-bryan.com

Sydney Coatsworth, Principal
Ascent Environmental, Inc.
Telephone: (916) 930-3185
Fax: (916) 444-3927
sydney.coatsworth@ascentenvironmental.com

January 2019

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association's
CEQA	California Environmental Quality Act
City	City of Stockton
CMA	Congestion Management Agency
Draft EIR	draft environmental impact report
FEMA	Federal Emergency Management Agency
Final EIR	final environmental impact report
mgd	million gallons per day
RWCF	Regional Wastewater Control Facility
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District

1 INTRODUCTION

This final environmental impact report (Final EIR) has been prepared by the City of Stockton, as lead agency, in accordance with the requirements of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines (CCR Section 15132). This Final EIR contains responses to comments received on the draft environmental impact report (Draft EIR) for the City of Stockton's (City) Regional Wastewater Control Facility (RWCF) Modifications Project. The Final EIR consists of the Draft EIR and this document, which includes comments on the Draft EIR, responses to those comments, and revisions to the Draft EIR.

1.1 PURPOSE AND INTENDED USES OF THIS FINAL EIR

CEQA requires a lead agency that has prepared a Draft EIR to consult with and obtain comments from responsible and trustee agencies that have jurisdiction by law with respect to the project, and to provide the public with an opportunity to comment on the Draft EIR. The Final EIR is the mechanism for responding to these comments. This Final EIR has been prepared to respond to comments received on the Draft EIR, which are reproduced in this document; and to present corrections, revisions, and other clarifications and amplifications to the Draft EIR, including project updates, made in response to these comments and as a result of the applicant's ongoing planning and design efforts. The Final EIR will be used to support the City Council's decision regarding whether to approve the RWCF Modifications Project.

This Final EIR will also be used by CEQA responsible and trustee agencies to ensure that they have met their requirements under CEQA before deciding whether to approve or permit project elements over which they have jurisdiction. It may also be used by other state, regional, and local agencies that may have an interest in resources that could be affected by the project or that have jurisdiction over portions of the project.

Responsible, trustee, and interested agencies may include:

Federal

- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

State

- California Central Valley Flood Protection Board
- California Department of Fish and Wildlife
- California Department of Transportation
- California State Office of Historic Preservation
- California State Water Resources Control Board
- Central Valley Regional Water Quality Control Board

Regional and Local

- City of Stockton
- City of Stockton Fire Department
- Reclamation District 404
- Reclamation District 524
- San Joaquin County Environmental Health Department
- San Joaquin County Public Works Department
- San Joaquin Valley Air Pollution Control District

1.2 PROJECT LOCATION

The project would be located at the City's RWCF located at 2500 Navy Drive, Stockton, San Joaquin County, California. The RWCF facility occupies approximately 800 acres adjacent to the San Joaquin River. Modifications would be implemented at both the main and tertiary plants of the RWCF. The main plant (east of the river) and tertiary plant (west of the river) are located on approximately 90 acres. The remaining 710 acres are occupied by oxidation ponds (Nos. 1, 2, and 3) and treatment wetlands west of the San Joaquin River.

The RWCF is bounded by Navy Drive and the San Joaquin River to the north, State Route (SR) 4 to the south, an access easement called Brooks Road to the east, and the Port of Stockton Expressway to the west. Regional access is provided by Interstate 5, Charter Way (SR 4), and Navy Drive.

The City of Stockton General Plan Land Use Map (City of Stockton 2007 and 2018) designates the RWCF property as "Institutional," which is for public and quasi-public land uses, including wastewater treatment facilities. Land recently purchased by the City to the south of the main plant is designated as "Industrial" and would be used for facilities and construction staging areas for this project and reserved for wastewater treatment facilities after this project is complete. Land uses in the vicinity include agricultural lands to the west and south, industrial and institutional lands to the north, and industrial, low density residential, and park space to the east/southeast. The nearest residential area is located approximately 0.5 mile southeast of the main plant.

1.3 PROJECT OBJECTIVES

The purpose of the RWCF Modifications Project is to: (1) increase the reliability of the liquid and solids treatment processes, (2) improve reliability in treating existing and projected flows, (3) reduce energy costs and provide reliable renewable energy alternatives, and (4) reduce nitrate plus nitrite (N+N) concentrations in the final effluent. The specific objectives of the RWCF Modifications Project are to:

- replace or rehabilitate aging treatment facilities thereby extending the useful life of the RWCF;
- reduce or eliminate unnecessary treatment processes to streamline operations;
- comply with effluent limitations specified in the RWCF National Pollution Discharge Elimination System (NPDES) permit;
- improve working conditions and operations support facilities for increased efficiency;
- improve energy efficiency and reduce reliance; and
- implement a project that reflects the priorities and funding capacity of the City.

1.4 SUMMARY DESCRIPTION OF THE PROJECT

The proposed RWCF modifications consist of demolition of certain treatment process components and buildings, rehabilitation and repurposing of some existing components and buildings, and construction of new treatment process components and buildings. The modifications would not involve any expansion of the RWCF treatment capacity. Existing RWCF facilities would remain in operation during construction of new and rehabilitated facilities to ensure continual wastewater treatment services. The proposed improvements would provide a wastewater treatment capacity of 40.2 million gallons per day (mgd) average dry-weather flow (ADWF). The proposed modifications to each component of the RWCF treatment process and RWCF personnel facilities are listed below.

PRELIMINARY TREATMENT

The following existing preliminary facilities would be demolished.

- Grit Dumpster Building
- Screenings Container Room

The following existing preliminary facilities would be rehabilitated and repurposed.

- Existing Headworks
- Existing Influent Pump Station

The following new preliminary facilities would be constructed.

- New Influent Pump Station
- New Headworks
- Hydrogen Peroxide Facility
- Screenings Collection Building

PRIMARY TREATMENT

The following existing primary treatment facilities would be demolished.

- Ferric Chloride and Polymer Facilities

The following existing primary treatment facilities would be rehabilitated and repurposed.

- Primary Clarifiers
- Primary Effluent Pump Station

The following new primary treatment facilities would be constructed.

- Ferric Chloride Facility
- Polymer Facility

SECONDARY TREATMENT

The following existing secondary treatment facilities would be demolished.

- Biotowers
- Existing Secondary Clarifiers
- Trickling Filters

The following existing secondary treatment facilities would be rehabilitated and repurposed.

- Diversion Pump Station

The following new secondary treatment facilities would be constructed.

- Aeration Basins and Secondary Clarifiers
- Blower Building
- Return Activated sludge and Waste-Activated Sludge Pump Stations

TERTIARY TREATMENT

The following existing tertiary treatment facilities would be abandoned.

- Nitrifying Biotowers
- Dissolved Air Flotation Thickeners
- Gravity Filters and Backwash Lagoon
- Tertiary Plant Facilities

The following new tertiary treatment facilities would be constructed.

- Disk Filters

EFFLUENT DISINFECTION

The following existing disinfection system facilities would be abandoned.

- Chlorine Contact Channel
- Chemical Storage Building
- Chemical Feed Building

The following new disinfection system would be constructed.

- A new ultraviolet disinfection system would be constructed at the main plant.

EFFLUENT DISCHARGE

- A new Final Effluent Pump Station would be constructed to pump final effluent to the existing RWCF outfall structure.

SOLIDS HANDLING

The following existing solids handling facilities would be rehabilitated and repurposed.

- Digested Sludge Storage Tank A
- Centrate-Filtrate Holding Tank

The following new solids handling facilities would be constructed.

- Solids Dewatering Facility
- Sludge Storage Pad and Loading Area
- Truck Scale

FLOW DIVERSION AND STORAGE

The facultative ponds and wetlands at the tertiary plant would be repurposed to serve as storage for diverted flow. A new diversion structure would be constructed upstream of the tertiary process to feed disk filters and divert flows beyond the capacity of the tertiary treatment system to the storage ponds.

PERSONNEL FACILITIES

The following existing personnel facilities would be abandoned or demolished and replaced with new or repurposed facilities.

- Operations Building
- Safety Building
- Engineering Building
- Stores Building

The following existing personnel facilities would be rehabilitated and repurposed.

- Administration-Laboratory Building
- Maintenance and Collections Building
- Parking Area

The following new personnel facilities would be constructed.

- Maintenance and Collections Building Expansion
- Laboratory and Safety Building
- Administration and Engineering Building
- Stores Building
- Outdoor Space

SECURITY

The RWCF Modifications Project would involve the following security improvements:

- A gate and guard shack
- Improved fencing and necessary security features to ensure controlled access to the plant
- Two additional access gates and one emergency entrance/exit
- A surveillance camera system

OTHER IMPROVEMENTS

- New electrical buildings
- A new septage station half-roundabout would be constructed
- A new pad would be constructed to discharge and dispose waste from the Vactor trucks
- New roadways within the plant site would be constructed
- New on-site water systems would be installed
- New landscaping
- New 3 megawatt diesel generator for standby power

1.5 MAJOR CONCLUSIONS OF THE ENVIRONMENTAL ANALYSIS

The Draft EIR identified the following significant impacts related to the project, which would all be reduced to less-than-significant levels with mitigation:

TERRESTRIAL BIOLOGICAL RESOURCES

- Impact 4.6-2: Disturbance to or Loss of Special-Status Plant Species and Habitat
- Impact 4.6-3: Disturbance to or Loss of Giant Garter Snake

- Impact 4.6-4: Disturbance to or Loss of Western Pond Turtle
- Impact 4.6-5: Disturbance to or Loss of Burrowing Owl
- Impact 4.6-6: Disturbance to or Loss of Swainson's Hawk, White-Tailed Kite, and Other Nesting Raptors
- Impact 4.6-7: Disturbance to or Loss of Tricolored Blackbird, Song Sparrow ("Modesto" Population), and Other Nesting Birds
- Impact 4.6-8: Disturbance to or Loss of Valley Elderberry Longhorn Beetle
- Impact 4.6-9: Disturbance to or Loss of Special-Status Bats
- Impact 4.6-10: Disturbance to Riparian Habitat

CULTURAL AND TRIBAL CULTURAL RESOURCES

- Impact 4.8-2: Effects on Previously Undiscovered Cultural Resources
- Impact 4.8-3: Effects on Previously Undiscovered Human Remains
- Impact 4.8-4: Effects on Paleontological Resources

TRANSPORTATION AND CIRCULATION

- Impact 4.11-1: Increased Traffic Congestion During Construction

1.6 CITY OF STOCKTON GENERAL PLAN UPDATE

During preparation of the Draft EIR for the RWCF Modifications Project, the City of Stockton was updating the 2035 General Plan; a Draft General Plan and EIR was released in June 2018. Therefore, the Draft EIR relied on the Stockton General Plan 2035 (2007), which was the adopted General Plan for the City of Stockton, but disclosed that the update was in progress. After publication of the RWCF Modifications Project Draft EIR, the City of Stockton adopted the new 2040 General Plan in December 2018. However, in both the previous 2035 General Plan (City of Stockton 2007) and the current 2040 General Plan (City of Stockton 2018) Land Use Maps, the RWCF property is designated for Institutional and the land to the south of the main plant that was recently purchased is designated as Industrial.

1.7 CEQA PUBLIC REVIEW PROCESS

On November 2, 2018, the City released the Draft EIR for a 45-day public review and comment period, which closed on December 17, 2018. The Draft EIR was submitted to the State Clearinghouse for distribution to reviewing agencies; posted on the City's website (http://www.stocktonca.gov/mudprojects); and was made available at the City Clerk's office and the Cesar Chavez Central Library. A notice of availability of the Draft EIR was published in *The Stockton Record* and distributed by the City to a project-specific mailing list.

As a result of these notification efforts, six written comment letters were received on the content of the Draft EIR from the following federal, state, and local agencies:

- San Joaquin Council of Governments
- San Joaquin Council of Governments, acting as the Airport Land Use Commission and Congestion Management Agency
- San Joaquin Valley Air Pollution Control District
- Reclamation District 404

- Delta Stewardship Council
- U.S. Department of Homeland Security, Federal Emergency Management Agency Region IX

Chapter 2, "Responses to Comments," identifies these commenting parties, their respective comments, and responses to these comments. None of the comments received, or the responses provided, constitute "significant new information" by CEQA standards (State CEQA Guidelines CCR Section 15088.5).

1.8 ORGANIZATION OF THE FINAL EIR

This Final EIR is organized as follows:

Chapter 1, "Introduction," describes the purpose of the Final EIR, summarizes the RWCF Modifications Project and the major conclusions of the Draft EIR, provides an overview of the CEQA public review process, and describes the content of the Final EIR.

Chapter 2, "Responses to Comments," contains a list of all parties who submitted comments on the Draft EIR during the public review period, copies of the comment letters received and responses to the comments.

Chapter 3, "Revisions to the Draft EIR," presents revisions to the Draft EIR text made in response to comments, or to amplify, clarify or make minor modifications or corrections. Changes in the text are signified by ~~strikeouts~~ where text is removed and by <u>underline</u> where text is added.

Chapter 4, "References," identifies the documents used as sources for the analysis.

Chapter 5, "List of Preparers," identifies the lead agency contacts as well as the preparers of this Final EIR.

This page intentionally left blank.

2 RESPONSES TO COMMENTS

This chapter contains comment letters received during the public review period for the Draft EIR, which concluded on December 17, 2018. In conformance with Section 15088(a) of the State CEQA Guidelines, written responses were prepared addressing comments on environmental issues received from reviewers of the Draft EIR.

2.1 LIST OF COMMENTERS ON THE DRAFT EIR

Table 2-1 presents the list of commenters, including the numerical designation for each comment letter received, the author of the comment letter, and the date of the comment letter.

Table 2-1 List of Commenters

Letter No.	Commenter	Date
1	San Joaquin Council of Governments Laurel Boyd	November 6, 2018
2	San Joaquin Council of Governments, acting as the Airport Land Use Commission and Congestion Management Agency Joel Campos	December 17, 2018
3	San Joaquin Valley Air Pollution Control District Brian Clements, Program Manager	December 17, 2018
4	Reclamation District 404 Dante J. Nomellini, Jr., Attorney at Law	December 17, 2018
5	Delta Stewardship Council Jeff Henderson, AICP, Deputy Executive Officer	December 17, 2018
6	U.S. Department of Homeland Security, Federal Emergency Management Agency Region IX Gregor Blackburn, CFM Branch Chief, Floodplain Management and Insurance Branch	December 12, 2018

2.2 COMMENTS AND RESPONSES

The individual comments received on the Draft EIR and the responses to those comments are provided below. The comment letters are reproduced in their entirety and are followed by the response(s). Where a commenter has provided multiple comments, each comment is indicated by a line bracket and an identifying number in the margin of the comment letter.

Letter 1

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 235-0600 • FAX (209) 235-0438

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LOCAL JURISDICTION (RTLJ)
ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Juan Chavez, City of Stockton, Municipal Utilities Department

From: Laurel Boyd, SJCOG, Inc.

Date: November 6, 2018

-Local Jurisdiction Project Title: Notice of Availability of a Draft Environmental Impact Report for the City of Stockton Regional Wastewater Control Facility Modifications Project

Assessor Parcel Number(s): 162-040-16, -17, -20, 162-140-01, 163-330-03, 163-340-09

Local Jurisdiction Project Number: M16022; SC#: 2018092017

Total Acres to be converted from Open Space Use: Unknown

Habitat Types to be Disturbed: Urban Habitat Land

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Mr. Chavez:

SJCOG, Inc. has reviewed the Notice of Availability of a Draft Environmental Impact Report for the City of Stockton Regional Wastewater Control Facility Modifications project. The project consists of demolition of certain treatment process components and buildings; rehabilitation and repurposing some existing components and buildings; and construction of new treatment process components buildings. Modifications to the facility's preliminary treatment, primary treatment, secondary treatment, tertiary treatment, disinfection, and solids handling systems are proposed. The project site is located north of State Route 4 and east of Port of Stockton Drive (APN/Address: 162-040-16, -17, -20, 162-140-01, 163-330-03, 163-340-09/2500 Navy Drive, Stockton).

The City of Stockton is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measure are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP. Although participation in the SJMSCP is voluntary, Local Jurisdiction/Lead Agencies should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP. 1-1

This Project is subject to the SJMSCP. Per requirements of the SJMSCP, this project must seek coverage due to required Army Corp permitting and Section 7 consultation. This project is subject to a case-by-case review. This can be up to a 60-90 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible. It is also recommended that the project applicant obtain an information package. http://www.sjcog.org

Please contact SJMSCP staff regarding completing the following steps to satisfy SJMSCP requirements:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- SJMSCP Incidental take Minimization Measures and mitigation requirement:

1. Incidental Take Minimization Measures (ITMMs) will be issued to the project and must be signed by the project applicant prior to any ground disturbance but no later than six (6) months from receipt of the ITMMs. If ITMMs are not signed within six months, the applicant must reapply for SJMSCP Coverage. Upon receipt of signed ITMMs from project applicant, SJCOG, Inc. staff will sign the ITMMs. This is the effective date of the ITMMs.
2. Under no circumstance shall ground disturbance occur without compliance and satisfaction of the ITMMs.
3. Upon issuance of fully executed ITMMs and prior to any ground disturbance, the project applicant must:
    a. Post a bond for payment of the applicable SJMSCP fee covering the entirety of the project acreage being covered (the bond should be valid for no longer than a 6 month period); or
    b. Pay the appropriate SJMSCP fee for the entirety of the project acreage being covered; or
    c. Dedicate land in-lieu of fees, either as conservation easements or fee title; or

d. Purchase approved mitigation bank credits.

4. Within 6 months from the effective date of the ITMMs or issuance of a building permit, whichever occurs first, the project applicant must:
   a. Pay the appropriate SJMSCP for the entirety of the project acreage being covered; or
   b. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   c. Purchase approved mitigation bank credits.

Failure to satisfy the obligations of the mitigation fee shall subject the bond to be called.

- Receive your Certificate of Payment and release the required permit

1-1 cont.

It should be noted that if this project has any potential impacts to waters of the United States [pursuant to Section 404 Clean Water Act], it would require the project to seek voluntary coverage through the unmapped process under the SJMSCP which could take up to 90 days. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

If you have any questions, please call (209) 235-0600.

3 | SJCOG, Inc.

S J C O G, Inc.

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan

555 East Weber Avenue • Stockton, CA 95202 • (209) 235-0600 • FAX (209) 235-0438

SJMSCP HOLD

TO: Local Jurisdiction: Community Development Department, Planning Department, Building Department, Engineering Department, Survey Department, Transportation Department, Other: _____

FROM: Laurel Boyd, SJCOG, Inc.

DO NOT AUTHORIZE SITE DISTURBANCE
DO NOT ISSUE A BUILDING PERMIT
DO NOT ISSUE _____ FOR THIS PROJECT

The landowner/developer for this site has requested coverage pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). In accordance with that agreement, the Applicant has agreed to:

1) SJMSCP Incidental Take Minimization Measures and mitigation requirement:

1. Incidental Take Minimization Measures (ITMMs) will be issued to the project and must be signed by the project applicant prior to any ground disturbance but no later than six (6) months from receipt of the ITMMs. If ITMMs are not signed within six months, the applicant must reapply for SJMSCP Coverage. Upon receipt of signed ITMMs from project applicant, SJCOG, Inc. staff will sign the ITMMs. This is the effective date of the ITMMs.
2. Under no circumstance shall ground disturbance occur without compliance and satisfaction of the ITMMs.
3. Upon issuance of fully executed ITMMs and prior to any ground disturbance, the project applicant must:
   a. Post a bond for payment of the applicable SJMSCP fee covering the entirety of the project acreage being covered (the bond should be valid for no longer than a 6 month period); or
   b. Pay the appropriate SJMSCP fee for the entirety of the project acreage being covered; or
   c. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   d. Purchase approved mitigation bank credits.
4. Within 6 months from the effective date of the ITMMs or issuance of a building permit, whichever occurs first, the project applicant must:
   a. Pay the appropriate SJMSCP for the entirety of the project acreage being covered; or
   b. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   c. Purchase approved mitigation bank credits.

   Failure to satisfy the obligations of the mitigation fee shall subject the bond to be called.

Project Title: Notice of Availability of a Draft EIR for the City of Stockton Regional Wastewater Control Facility Modifications Project

Assessor Parcel #s: 162-040-16, -17, -20; 162-140-01; 163-330-03, 163-340-09

T _____, R_____, Section(s): _____

Local Jurisdiction Contact: Juan Chavez

The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measures are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP.

Letter 1	San Joaquin Council of Governments Laurel Boyd November 6, 2018

1-1 The comment states that the City of Stockton is a signatory to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), that City retains responsibility for ensuring that the appropriate incidental take minimization measures are properly implemented and monitored, and that the City is responsible for payment of appropriate fees in compliance with the SJMSCP. The Stockton RWCF Modifications Project is subject to the SJMSCP.

Section 4.6, "Biological Resources," of the Draft EIR discusses the SJMSCP and City of Stockton's participation. The City of Stockton General Plan (both the 2035 General Plan in place at the time the Draft EIR was published and the 2040 General Plan Update approved by City Council in December 2018) outlines policies to protect natural resources, including coordination with the SJMSCP. The mitigation measures imposed in the Draft EIR related to impacts on riparian habitat, special-status plants, giant garter snake, western pond turtle, burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, other nesting raptors, tricolored blackbird, song sparrow ("Modesto" population), other nesting birds, valley elderberry longhorn beetle, and special-status bats require avoidance and minimization measures consistent with the SJMSCP. The measures address the required pre-construction surveys and payment of SJMSCP fees when necessary.

Per the requirements of the SJMSCP, the City will seek coverage for this project and will contact SJMSCP staff in regard to completing the correct steps to satisfy SJMSCP requirements.

Letter 2

SAN JOAQUIN COUNCIL OF GOVERNMENTS

555 E. Weber Avenue ● Stockton, California 95202 ● P 209.235.0600 ● F 209.235.0438 ● www.sjcog.org

San Joaquin County Airport Land Use Commission/Congestion Management Agency

Robert Rickman
CHAIR
Doug Kuehne
VICE CHAIR
Andrew T. Chesley
EXECUTIVE DIRECTOR
Member Agencies
CITIES OF ESCALON, LATHROP, LODI, MANTECA, RIPON, STOCKTON, TRACY, AND THE COUNTY OF SAN JOAQUIN

December 17, 2018

Juan Chavez
City of Stockton Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95206

Re: NOA DEIR Proposed Regional Wastewater Control Facility Modifications Project (Deadline: 12/17/18)

Dear Juan Chavez,

The San Joaquin Council of Governments (SJCOG), acting as the Airport Land Use Commission (ALUC) and Congestion Management Agency (CMA), has reviewed a Proposed Regional Wastewater Control Facility Modifications Project's DEIR at 2500 Navy Drive, Stockton.

CONGESTION MANAGEMENT AGENCY'S REVIEW

SJCOG adopted the 2018 Update to the Regional Congestion Management Program (RCMP) (http://www.sjcog.org/rcmp) on April 26, 2018. Chapter 6 of the RCMP describes the updated Land Use Analysis Program, including Tier 1 and Tier 2 review/analysis requirements, analysis methods, impact significance criteria, and mitigation. 2-1

SJCOG staff has reviewed and found that the Stockton Regional Wastewater Control Facility Modifications Project's DEIR addresses existing and future transportation impacts along the regional roadway network in San Joaquin County.

AIRPORT LAND USE COMMISION'S REVIEW

SJCOG staff has reviewed the Stockton Regional Wastewater Control Facility Modifications Project's DEIR and have the following comments.

- On page 10-17, the DEIR references the "San Joaquin County's Aviation System." SJCOG is acting as the "Airport Land Use Commission". 2-2
- Requests verification that the Caltrans Division of Aeronautics and the Stockton Metropolitan Airport were contacted, based on October 8, 2018 NOP DEIR Proposed Regional Wastewater Control Facility Modifications Project comment letter. (Attachment A) 2-3

Thank you again for the opportunity to comment. Please contact CMA and ALUC staff Joel Campos (209-235-1090 or campos@sjcog.org) if you have any questions or comments.

Sincerely,

Joel Campos

ATTACHMENT A – October 8th 2018 NOP DEIR Proposed Regional Wastewater Control Facility Modifications Project comment letter

Letter 2	San Joaquin Council of Governments, acting as the Airport Land Use Commission and Congestion Management Agency Joel Campos December 17, 2018

2-1 The San Joaquin Council of Governments (SJCOG), acting as the Congestion Management Agency (CMA), finds that the Draft EIR addresses existing and future transportation impacts along the regional roadway network in San Joaquin County. The City acknowledges the CMA's review.

2-2 SJCOG notes that it is acting as the Airport Land Use Commission. The City acknowledges this fact and revises the citation as:

> San Joaquin Council of Governments, acting as the Airport Land Use Commission. 2018b. San Joaquin County's Aviation System, Stockton Metropolitan Airport Land Use Compatibility Plan.

2-3 The SJCOG, acting as the Airport Land Use Commission, requests verification that the Caltrans Division of Aeronautics and the Stockton Metropolitan Airport were contacted, per SJCOG's NOP comment letter dated October 8, 2018. The City sent notice of the Draft EIR to Caltrans Division of Aeronautics. In addition, the City contacted both Caltrans Division of Aeronautics and the Stockton Metropolitan Airport directly via email during the Draft EIR comment period.

The City received response via email on January 3, 2019, from Bob Fiore, Office of Aviation Planning, Division of Aeronautics, California Department of Transportation, explaining that FAA Advisory Circular 150/5200-33b is directed at local planners and airport operators to minimize risks to human safety and protect the natural environment. The comment encourages the City to strive to minimize wildlife hazards (bird strike hazards) by working with local planners and the airport operator and preparing a wildlife hazard management plan.

The RWCF is an existing wastewater treatment facility, originally constructed in 1922, that operates 24-hours a day, 7-days a week. The ponds and wetlands associated with the RWCF are part of the active treatment process, are not jurisdictional wetlands or waters, and are regulated under the RWCF's National Pollutant Discharge Elimination System permit. The proposed RWCF modifications would occur within the existing RWCF facility and would not increase wildlife habitat or bird populations. Rather, as discussed in Impact 4.6-1 of the Draft EIR, following implementation of the project, the existing oxidation ponds and tertiary treatment wetlands at the RWCF would no longer receive wastewater year-round. This could result in changes to the vegetation within these features (e.g., reduction or loss of tule and cattails) that provide habitat for wildlife species, and changes in the availability of open water habitat used seasonally by waterfowl. The open water habitat would no longer be present year-round. These changes could constitute a reduction in habitat for wildlife at the RWCF. A reduction in habitat would relate to a reduction in wildlife hazards related to the RWCF. As an existing/active wastewater treatment plant and due to the project-related reduction in open water habitat, a wildlife hazard management plan is not necessary. However, as recommended, the City will coordinate with local planners and the airport operator to consider the minimization of wildlife hazards during implementation of the project.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LI

Letter 3

DEC 17 2018

Juan Chavez
City of Stockton
Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95206

Project: Draft Environmental Impact Report for the City of Stockton Regional Wastewater Control Facility Modification Project

District CEQA Reference No: 20181242

Dear Mr. Chavez:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Draft Environmental Impact Report (EIR) for the City of Stockton Regional Wastewater Control Facility (RWCF) Modification Project. Per the EIR, the RWCF Modification Project consists of the following:

- Demolition of certain treatment process components and buildings
- Rehabilitation and repurposing of some existing components and buildings
- Construction of new treatment process components and buildings

The EIR states the RWCF Modification Project would not provide any additional wastewater treatment capacity beyond the existing permitted discharge capacity of 55 million gallons per day, and that modifications are required to maintain compliance with the National Pollutant Discharge Elimination System (NPDES) permit that regulates discharges from the RWCF to the San Joaquin River, extend the useful life of existing facilities, improve working conditions for facility staff, and implement components of the City's Capital Improvement and Energy Management Plan (CIEMP). The District offers the following comments:

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

District CEQA Reference No: 20181242 *Page 2 of 4*

1) Ambient Air Quality Analysis (AAQA)

The District recommends that the project's daily construction emissions be quantified and compared against the District's 100 pounds per day screening level. Should any criteria pollutant emission exceed 100 pounds per day, the District further recommends that an AAQA be performed.

On Page 4.2-13, the draft EIR compared the project's criteria pollutant emissions for construction activities against the District's significance thresholds. The table shows that construction emissions are all below the District's significance thresholds. The draft EIR concluded that construction activities would not violate an air quality standard or contribute substantially to an existing or projected air quality violation and the impact would be less than significant.

The District would like to clarify that determination of whether project emissions would violate any ambient air quality standards 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 not to violate any air quality standards or contribute substantially to an existing or projected air quality violation.

3-1

The need to perform an air quality dispersion modeling analysis (also known as an ambient air quality analysis) for any project depends on the level of emissions associated with the proposed project. The impact may be significant when on-site emissions increases from construction activities or operational activities exceed the 100 pound per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures.

Therefore, the District recommends that the project's daily criteria pollutant emissions be quantified and compared against the 100 pounds per day screening level. Should any criteria pollutant emission exceed the 100 pounds per day screening level, the District further recommends that an ambient air quality analysis be performed.

If an ambient air quality analysis is performed, the analysis should include emissions from both project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

2) California Emissions Estimator Model (CalEEMod)

The District recommends providing clarification regarding the CalEEMod emissions analysis for construction activities, and re-analysis if needed.

On page 3-35, the draft EIR states that construction activities for the proposed project is anticipated to begin in 2019 and end in 2023. However, the CalEEMod modeling results in Appendix B, that are used to support the impacts conclusion, analyzed construction activities for a shorter time period starting in 2019 and ending in 2021. If the draft EIR construction period is correct then the CalEEMod analysis is underestimating the construction emissions. The District recommends that the City provide clarification for this discrepancy, and recommends that the draft EIR and CalEEMod analysis be revised for consistency, for whichever the correct length of construction is and in case should the conclusion of the impact changes. 3-2

3) Health Risk Screening Analysis – Prioritization

The District recommends that the prioritization be revised based on the following comments:

- In Appendix B Health Risk Screening Analysis, the prioritization includes only offsite residential receptors. When assessing health impacts, the District requires that offsite worker, residential, and sensitive receptors be included in the prioritization or Health Risk Assessment (HRA). There appears to be some worker receptors from the nearby industrial site that were not included in the prioritization. Therefore, the District recommends that the prioritization be revised to include worker receptors. In addition, if there is a change to the construction emissions based on the comment above, the revised prioritization should also include the updated construction emissions. 3-3

- On page 4.2-16, the draft EIR stats that Toxic Air Contaminants (TAC) emissions were estimated based on the daily processing capacity of 33 million gallons per day. However, on page 2-2, the draft EIR states the proposed project would provide a wastewater treatment capacity of 40.2 million gallons per day. The District recommends clarification for this discrepancy and recommends that the analysis be revised for consistency.

4) Rule 4002 National Emissions Standards for Hazardous Air Pollutants (NESHAP)

The District recommends addressing asbestos requirements before any regulated facility is demolished or renovated. 3-4

The proposed project is subject to Rule 4002 since the project will require existing buildings to be renovated, partially demolished or removed. This rule requires a thorough inspection for asbestos to be conducted before any regulated facility is

demolished or renovated. Information on how to comply with District Rule 4002 can be found online at: http://www.valleyair.org/busind/comply/asbestosbultn.htm. 3-4 cont.

5) **Rule 2010 Permits Required and Rule 2201 New and Modified Stationary Source Review**

The District recommends submitting an Authority to Construct (ATC) permit application to the District prior to starting construction.

The proposed project is subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and will require District permits. Prior to construction, the project proponent should submit to the District an application for an Authority to Construct (ATC). For further information or assistance, the project proponent may contact the District's Small Business Assistance (SBA) Office at (209) 557-6446. 3-5

6) **Other District Rules and Regulations**

The proposed project may be subject to other District rules and regulations.

The proposed project may be subject to District rules and regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information on the District's permit requirements, such as an Authority to Construct (ATC), the project proponent is strongly encouraged to contact the District's Small Business Assistance Office at (209) 557-6446 or e-mail SBA@valleyair.org. Current District rules can be found online at the District's website at: www.valleyair.org/rules/1ruleslist.htm. 3-6

The District appreciates the opportunity to comment on the Draft EIR for the City of Stockton RWCF Modification Project. If you have any questions or require further information, please call Sharla Yang at (559) 230-5934.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Brian Clements
Program Manager

AM: sy

Letter 3	San Joaquin Valley Air Pollution Control District Brian Clements, Program Manager December 17, 2018

3-1 The comment recommends that the project's daily construction emissions be quantified and compared to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) daily screening criteria to determine if the project would violate any ambient air quality standard.

The Draft EIR modeled project-related construction activity using SJVAPCD-approved California Emissions Estimator Model (CalEEMod) software and compared emissions to the SJVAPCD CEQA significance thresholds for criteria air pollutants and precursors, measured in tons per year. The SJVAPCD significance thresholds and modeled annual project emissions are shown in Table 4.2-6 of the Draft EIR. As shown in Table 4.2-6, all emissions of criteria air pollutants and precursors were modeled to be below the SJVAPCD significance thresholds and, therefore, were determined not to violate any air quality standards.

To address the comment, daily emissions were modeled using CalEEMod and compared to the 100 pounds per day screening levels, as suggested by SJVAPCD, and are presented in a new table, Table 4.2-7. Table 4.2-7, which is hereby added to the Draft EIR and numbered to track with the Draft EIR tables in Section 4.2, "Air Quality," presents the project-generated emissions, which would all be below the 100 pounds per day screening threshold. As a result, no further air dispersion modeling is required, and the project is determined not to violate any ambient air quality standard.

Table 4.2-7 Summary of Modeled Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction Activities (pounds per day)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Demolition, Facility Construction, and Paving	33.4	54.5	4.7	<0.1	20.5	12.1
Worker Commute and Vendor Trips	3.6	2.1	0.5	<0.1	0.9	0.2
Total	37.0	56.6	5.2	0.0	21.3	12.4
SJVAPCD Screening Threshold	100	100	100	100	100	100

Notes: Maximum daily emissions were calculated based on a worst-case day when all proposed construction would overlap.

Source: Modeling conducted by Ascent Environmental 2018.

It should be noted that while conducting the additional emissions modeling, it was discovered that off-gassing emissions associated with architectural coatings were overestimated in the Draft EIR. The overestimate was due to default CalEEMod inputs that assumed all new non-residential facilities would require architectural coatings. Adjustments were made to the modeling to exclude facilities that would not require architectural coating (e.g., stationary equipment, lagoons). Therefore, emissions adjustments made to Table 4.2-6 of the Draft EIR are shown below.

Table 4.2-6 Summary of Modeled Maximum ~~Daily~~ Annual Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction Activities (tons per year)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Demolition, Facility Construction, and Paving	3.5	4.4	~~2.6~~0.3	<0.1	0.5	0.3
Worker Commute and Vendor Trips	0.4	0.2	<0.1	<0.1	0.1	<1
Total	3.9	4.6	~~2.6~~0.3	<0.1	0.6	0.3
SJVAPCD Thresholds of Significance	100	10	10	27	15	15
Federal Conformity Thresholds	100	10	10	100	100	100

Notes: Maximum ~~daily~~ annual emissions were calculated based on a worst-case year when all proposed construction would overlap.

See Appendix B for detail on model inputs, assumptions, and project specific modeling parameters.

Source: Modeling conducted by Ascent Environmental 2018.

3-2 The commenter is requesting clarification on a discrepancy between the stated length of construction activity discussed on page 3-35 of the Draft EIR and the length of construction activity shown in the emissions modeling details in Appendix B of the Draft EIR. The length of construction activity stated on page 3-35 of the Draft EIR is the correct length of construction (i.e., years 2019 through 2023). However, construction emissions were modeled using CalEEMod's default construction periods for the size and type of land uses for the project. Based on the program's default length of construction for the project's land uses, CalEEMod assumed that construction would occur between 2019 and 2021 as shown in Appendix B. Using CalEEMod default construction phasing and lengths for all anticipated construction activity results in a more conservative analysis, as the model assumes more activity would occur in less time. Further, and as discussed in the Methods and Assumptions section of Section 4.2 of the Draft EIR, construction emissions from all three years were combined to represent a single worst-case year for comparison to the tons per year thresholds. Therefore, the construction emissions are conservative and no revisions to the Draft EIR analysis are necessary.

3-3 The comment recommends making changes to the prioritization calculation and construction emissions estimates based on comment 3-2, above. Because the construction timeframe resulted in a conservative analysis and because the construction emissions were combined to represent a single worst-case year and then compared to the tons per year thresholds, no revisions to the Draft EIR analysis are necessary. See response to comment 3-2, above.

The comment suggests revising the prioritization analysis to include the nearby industrial land uses as worker receptors. It is acknowledged that the basis for the Toxic Air Contaminant (TAC) analysis is the nearest offsite residential receptor. However, all nearby land uses were evaluated and considered in the TAC analysis and based on a review of aerial imagery and discussions with the City it was determined that the offsite residential receptors were of primary concern regarding TAC exposure from construction activities. A review of aerial imagery of the adjacent industrial land uses indicated that the industrial buildings are warehouses/distribution centers with no outdoor activity areas or windows. In addition, workers at these sites work typical daytime hours (approximately 8-10 hours per day), primarily indoors. For these reasons, risk exposure at these land uses would be substantially lower than that estimated for the residential risk receptors south of the project site.

Importantly, the prioritization calculations are highly conservative and calculate risk for residential receptors, not worker receptors. Using the prioritization calculator to evaluate worker risk exposure would yield overly conservative and inaccurate results for these receptors as explained further below.

The prioritization calculator was developed by SJVAPCD in accordance with the California Air Pollution Control Officers Association's (CAPCOA) Facility Prioritization Guidelines (2016), which were in turn developed in consultation with the California Air Resources Board and the Office of Environmental Health Hazard Assessment. The calculator provides a conservative estimate of health risk and is intended to be used as a screening tool for air districts to identify facilities that should prepare health risk assessments (HRAs). There is no specific requirement to use the CAPCOA prioritization calculation methods (CAPCOA, 2016). Thus, for CEQA analyses, although the tool may be useful to evaluate certain sources and receptors, it may not always be appropriate for all receptors or short-term exposure, such as that associated with construction activities.

Based on direction from the SJVAPCD, the prioritization calculator was used to estimate health risk from the project's construction activity, with diesel particulate matter the primary pollutant of concern. The risk calculations are conservative in important ways. First, cancer risk is based on a long-term exposure period, typically 70-years. Second, the cancer risk normalization factor used in the analysis is also conservative. A cancer normalization factor relates the calculated health risk due to emissions from a source/facility and the toxicity of the emissions. The prioritization calculator uses residential cancer risk normalization factors, based on modeling conducted by the Office of Environmental Health Hazard Assessment, that captures the 95th percentile of all normalization values generated by modeling of 44 different sources at approximately 500,000 receptors. Thus, risk estimates generated using the prioritization method generate the highest (or most conservative) risk estimates for a particular source/receptor combination.

Because the thresholds for residential receptors are not exceeded for the project utilizing the conservative prioritization calculator, the likelihood of substantial concentrations of TACs and adverse health effects at industrial land uses is even less likely given the nature of the enclosed warehouses with limited windows, lack of outdoor work or play areas, and presence of workers for portions the day during the work-week. Based on the review of existing nearby receptors, the anticipated duration of construction activities (i.e., 3.5 years), and the estimated conservative risk values, project-related construction activities would not result in substantial TAC exposure at any nearby receptors. Nonetheless, the City of Stockton is preparing a focused HRA to evaluate health risk at the industrial land use worker receptors due to the project's construction-period TAC concentrations. The City will provide this information to the SJVAPCD and will consider the conclusions prior to certification of the EIR and rendering a decision on the project.

The comment seeks clarification between the treatment capacity of 40.2 million gallons per day (mgd) as described on page 2-2 of the Draft EIR and the use of the 33 million gallons per day for the TAC modeling, described on page 4.2-16. As described on page 4.2.16 of the Draft EIR, process emissions were based on the daily treatment level of 33 mgd, and therefore, emission estimates were based on actual operations. However, because the project could treat up to 40.2 mgd on an average dry weather flow basis, the emissions estimates from operation of the facility were updated to reflect treatment capacity of 40.2 mgd. Annual and hourly emissions were then input into the prioritization calculator. For the same receptor distance (i.e., between 1,640 feet and 3,281 feet), the prioritization score increased from 1.1 (as reported on page 4.2-16 of the Draft EIR) to 1.34, still substantially below the SJVAPCD's prioritization threshold of 10. No changes to the Draft EIR analysis are required.

3-4 The comment states that the project must comply with SJVAPCD Rule 4002. The City will work with SJVAPCD to ensure all necessary permitting is obtained for the project. No revisions to the Draft EIR are necessary.

3-5 The comment states that the project must comply with SJVAPCD Rule 2010 and 2201. The City will work with SJVAPCD to ensure all necessary permitting is obtained for the project. No revisions to the Draft EIR are necessary.

3-6 The comment states that the project must comply with SJVAPCD Rule 4102, 4601, and 4641. The City will work with SJVAPCD to ensure all necessary permitting is obtained for the project. No revisions to the Draft EIR are necessary.

From: Dante Nomellini, Jr. [mailto:dantejr@pacbell.net]
Sent: Monday, December 17, 2018 2:48 PM
To: Juan Chavez <Juan.Chavez@stocktonca.gov>
Cc: Chris Neudeck <cneudeck@ksninc.com>; Erik Almaas <ealmaas@ksninc.com>
Subject: RWCF Modifications Project (M16022) Draft EIR Comments from RD 404

Letter 4

Dear Mr. Chavez,

I am submitting these comments on behalf of Reclamation District No. 404 ("Boggs Tract"). Attached are some excerpts of RD 404's general authority and powers, as well as a map of its boundaries.

The DEIR at page 3-31 states, with emphasis added:

"Pipelines: New pipelines for effluent discharge and conveyance to storage ponds would consist of: . . . (2) **a new 36-inch force main** and existing 36-inch force main to convey flows from the Diversion Pump Station across the San Joaquin River (via an existing bridge) and into the pond return channel . . . ."

That new 36-inch force main is also depicted on Exhibit 3-10 (a copy of which is attached hereto).

While I could not readily find much, if any, discussion of the details of the proposed design and construction of that force main in the DEIR, please be advised that an encroachment permit from RD 404 will most likely be required for the construction and operation of that force main because, as depicted, it will cross through RD 404's levee. 4-1

Accordingly, please include RD 404 in the list of state and local agencies that have approval authority over one or more features of this project on pages 2-5 and 2-6 of the DEIR.

(Because the project will also similarly impact the levees of the adjacent reclamation district across the river, i.e., Reclamation District No. 524 ("Middle Roberts Island"), that reclamation district should also be added to that list.)

Thank you for your consideration of these comments.

And please acknowledge receipt of this email.

Dan Jr.

Secretary & Attorney for RD 404

cc: RD 404 Engineers: Chris Neudeck and Erik Almaas

Dante J. Nomellini, Jr. ("Dan Jr.")
Attorney at Law
Nomellini, Grilli & McDaniel
Professional Law Corporations
235 East Weber Avenue
Stockton, CA 95202
Mailing address:
P.O. Box 1461
Stockton, CA 95201-1461
Telephone: (209) 465-5883
Facsimile: (209) 465-3956
Email: dantejr@pacbell.net

Some Excerpts from the Water Code & County Ordinance Code re Reclamation Districts' Authority/Jurisdiction/Powers

- **General Powers:**

"The board [of trustees of a reclamation district] shall exercise general supervision and complete control over the construction, maintenance and operation of the reclamation works, and generally over the affairs of the district." (Water Code section 50652.)

"'Reclamation works' means such public works and equipment as are necessary for the unwatering, watering, or irrigation of district lands and other district operations." (Water Code section 50013.)

- **Incidental Powers:**

"A district may do all things necessary or convenient for accomplishing the purposes for which it was formed." (Water Code section 50900.)

Purposes for which it was formed are, namely, "to reclaim the land" from its former status as "swamp and overflowed, salt-marsh, or tidelands, or other lands subject to flood or overflow . . . ." (Water Code section 50300.)

- **Construction and Operation of Works:**

"A district may construct, maintain and operate such drains, canals, sluices, bulkheads, water gates, levees, embankments, pumping plants, dams, diversion works, or irrigation works, and all things reasonably necessary or convenient for accomplishing the purposes of the district." (Water Code section 50932.)

- **Operation of Facilities to Provide Access to Levee, Drainage, and Irrigation Systems and Lands Within District:**

"A district may construct, maintain, and operate ferry boats, bridges, road systems, and related facilities to provide access to the district's levee, drainage, and irrigation systems, and to provide access to the lands within the district." (Water Code section 50933.)

- **San Joaquin County Ordinance Code:**

"9-1405.7 Levee Work. "No person shall excavate or remove any material from or otherwise alter any levee required for any waterway, water body, or local drainage control without prior approval of the agency responsible for the maintenance of the levee." (Ord. 3675)."

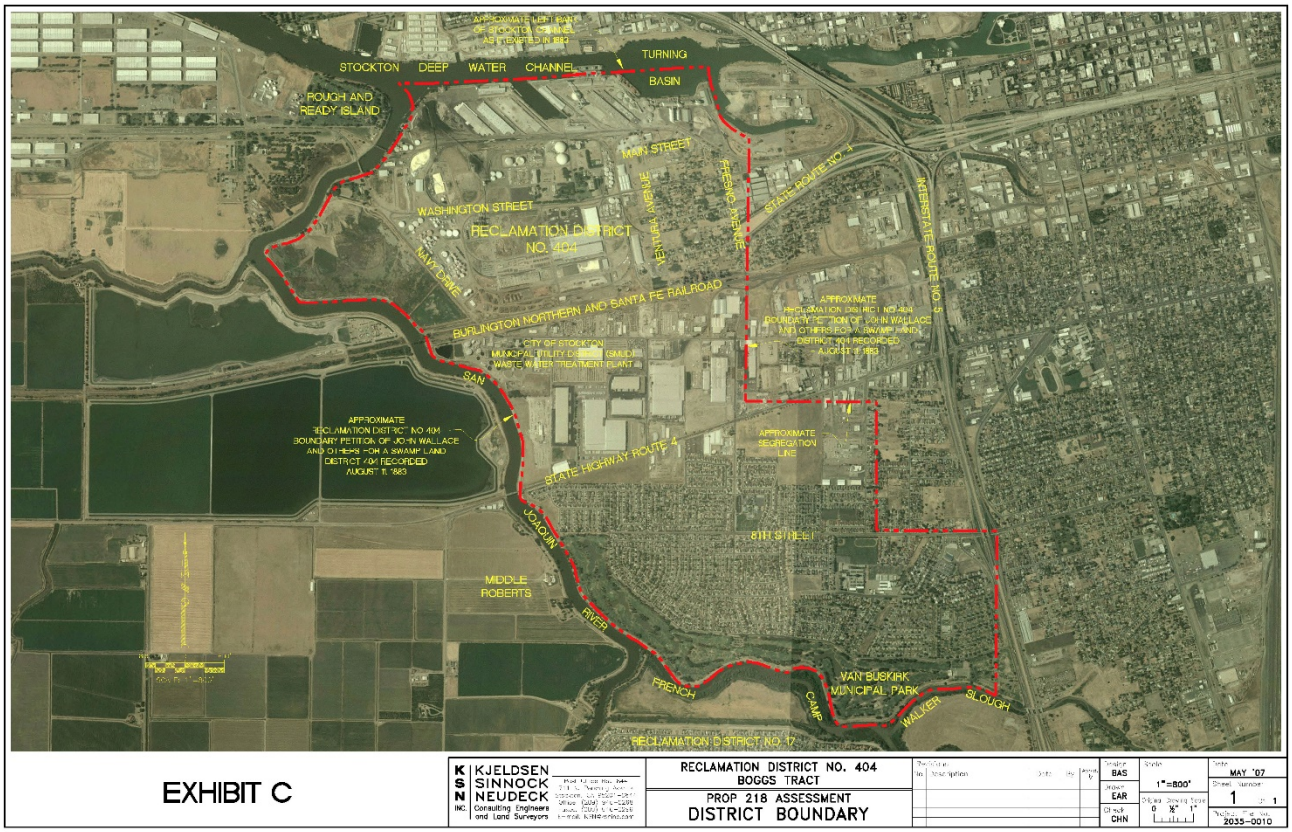
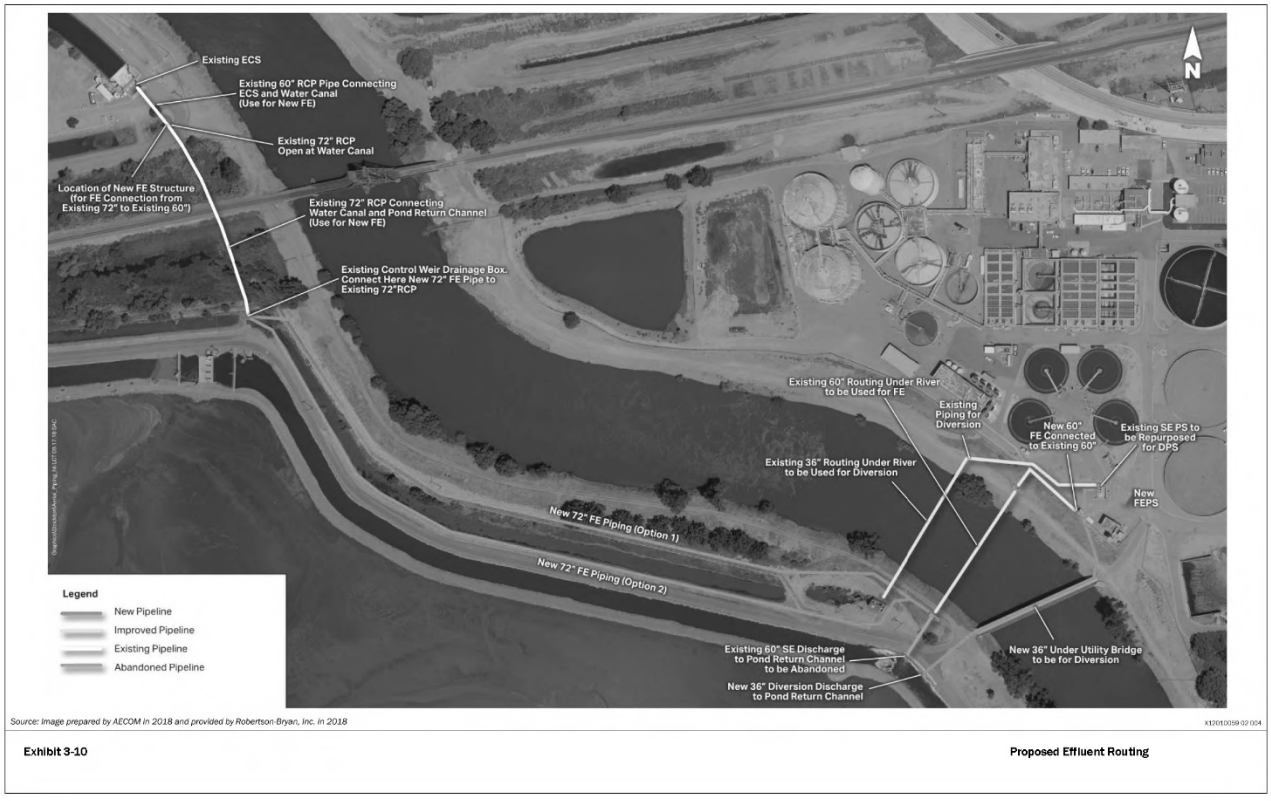


EXHIBIT C

KJELDSEN SINNOCK NEUDECK INC. Consulting Engineers and Land Surveyors

RECLAMATION DISTRICT NO. 404
BOGGS TRACT
PROP 218 ASSESSMENT
DISTRICT BOUNDARY

DRAWN BAS | SCALE 1"=800' | DATE MAY '07
CHECKED EAR | SHEET NUMBER 1
CHN | 2035-0010



Source: Image prepared by AECOM in 2018 and provided by Robertson-Bryan, Inc. in 2018

Exhibit 3-10 Proposed Effluent Routing

Letter 4	Reclamation District 404 Dante J. Nomellini, Jr., Attorney at Law December 17, 2018

4-1 The comment states that encroachment permits will most likely be required from Reclamation Districts 404 and 524 to implement the project because construction and operation of the new 36-inch force main would cross through the levees of these reclamation districts. In response to this comment, the bulleted list of regional and local permits and/or approvals that could be required for the project, which appears on pages 1-9 and 2-6 of the Draft EIR is revised as follows:

- **City of Stockton Fire Department**: Above-ground storage permit for the storage of diesel on the project site.
- **Reclamation District 404**: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 404's levee.
- **Reclamation District 524**: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 524's levee.
- **San Joaquin County Environmental Health Department**: Modification to the existing unified program consolidated permit, which covers all hazardous materials programs.

This revision does not constitute significant new information and, therefore, does not require recirculation of the Draft EIR.

DELTA STEWARDSHIP COUNCIL
A California State Agency

980 NINTH STREET, SUITE 150
SACRAMENTO, CALIFORNIA 9581
HTTP://DELTACOUNCIL.CA.GO
(916) 445-5511

Letter 5

December 17, 2018

Juan Chavez
City of Stockton, Municipal Utilities Department
2500 Navy Drive
Stockton, CA 95602

Via email: juan.chavez@stocktonca.gov

RE: Comments on the Public Draft Environmental Impact Report for the Proposed City of Stockton Regional Wastewater Control Facility Modification Project, SCH# 2018092017

Dear Mr. Juan Chavez:

Thank you for the opportunity to review and comment on the City of Stockton's (City) Proposed Regional Wastewater Control Facility Modification Project (project) Public Draft Environmental Impact Report (DEIR). The Delta Stewardship Council (Council) previously sent a letter with comments on the Notice of Preparation (NOP) for the Project on October 8, 2018.

Based on the project description in the DEIR, the Council understands that the proposed project consists of demolition of certain treatment process components and buildings, rehabilitation and repurposing of some existing components and buildings, and construction of new treatment process components and buildings. These modifications would not involve expansion of the regional wastewater control facility treatment capacity and that the proposed improvements would provide a wastewater treatment capacity of 40.2 million gallons per day (mgd) average dry-weather flow (ADWF). The DEIR states that the project objectives are to:

- Increase the reliability of the liquid and solids treatment processes;
- Improve reliability in treating existing and projected flows;
- Reduce energy costs and provide reliable renewable energy alternatives; and
- Reduce nitrate and nitrite (N+N) concentrations in the final effluent.

The project site is located west of Interstate 5 and north of State Route 4 within the Sacramento-San Joaquin Delta (Delta). Portions of the project site located west of the San

5-1

"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."

– CA Water Code §85054

Joaquin River are located within the Delta Primary Zone. Portions of the project site located east of the San Joaquin River are located within the Delta Secondary Zone.

The Council is an independent State of California agency established by the Sacramento-San Joaquin Delta Reform Act of 2009 (SBX7 1; Delta Reform Act). The Council is charged with furthering California's coequal goals for the Delta through the adoption and implementation of the Delta Plan, regulatory portions of which became effective on September 1, 2013.

As stated in the Delta Reform Act, the State has coequal goals for the Delta: providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place (Water Code section 85054).

5-1 cont.

Covered Action Status

Through the Delta Reform Act, the Council was granted specific regulatory and appellate authority over certain actions that take place in whole or in part in the Delta and Suisun Marsh, which are referred to as covered actions. The Council exercises that authority through development and implementation of the Delta Plan. State and local agencies are required to demonstrate consistency with 14 regulatory policies identified in the Delta Plan when carrying out, approving, or funding a covered action.

Based on the project description, location, and scope, the proposed project meets the definition of a covered action. The City must determine if the project is a covered action, and if so, submit a certification of consistency with the Delta Plan to the Council prior to project implementation. As the City proceeds with the project, we invite you to engage Council staff in early consultation to determine consistency with the Delta Plan. More information on covered actions, early consultation, and the certification process can be found on the Council website, http://deltacouncil.ca.gov/covered-actions.

5-2

For the purposes of compliance with both the Delta Reform Act and the California Environmental Quality Act (CEQA), we offer the following comments for your consideration in preparing the Final Environmental Impact Report (FEIR).

Comments on the DEIR

The following comments address actions outlined in the DEIR relevant to the Delta Plan.

Regulatory Setting

The DEIR does not identify the Delta Plan in its description of the regulatory setting within any resource section. The DEIR identifies several potentially significant impacts on Terrestrial Biological Resources and Transportation and Circulation, and proposes a number of measures to mitigate these potential impacts. These potentially significant impacts and

5-3

Juan Chavez
City of Stockton, Municipal Utilities Department
December 17, 2018
Page 3

mitigation measures address regulatory requirements specified in the Delta Plan. Please add a description of the Delta Plan to the regulatory setting discussion within these resource sections. 5-3 cont.

Terrestrial Biological Resources and Transportation and Circulation

Delta Plan Policy GP1(b)2 requires that "(c)overed actions not exempt from CEQA … include applicable feasible mitigation measures identified in the Delta Plan's Program EIR …or substitute mitigation measures that the agency that files the certification of consistency finds are equally or more effective."

Please review the Delta Plan Mitigation and Monitoring Reporting Program (http://deltacouncil.ca.gov/sites/default/files/documents/files/Agenda%20Item%206a_attach%202.pdf) to ensure that the mitigation measures proposed in the DEIR to avoid or reduce potentially significant Terrestrial Biological Resources and Transportation and Circulation impacts are equally or more effective than Delta Plan Program EIR mitigation measures. If they are not, please consider modifying the proposed mitigation measures to ensure that they meet this requirement. 5-4

Closing Comments

The Council would like to continue to work collaboratively with the City to determine the consistency of the project with the Delta Plan. Council staff is available to continue discussions as you proceed in the next stages of your project approval process. I encourage you to contact Andrew Schwarz of my staff at (916) 445-2168 or andrew.schwarz@deltacouncil.ca.gov with any questions, comments, or concerns. 5-5

Sincerely,

Jeff Henderson, AICP
Deputy Executive Officer
Delta Stewardship Council

Letter 5	Delta Stewardship Council Jeff Henderson, AICP, Deputy Executive Officer December 17, 2018

5-1 This comment is introductory information that describes the project, the statutory basis for the Delta Stewardship Council and its responsibility, and coequal goals for the Delta.

5-2 This comment states that the project meets the definition of a "covered action" under the Delta Reform Act, and then states that the City must determine if the project is a "covered action." The Delta Stewardship Council provides a Covered Action Checklist on its website to make a determination whether a project is a "covered action" (available at: http://deltacouncil.ca.gov/sites/default/files/2014/11/2014-11-25-Covered-Actions-Checklist.pdf). The checklist consists of a series of questions about the project to make this determination. This response walks through each step of the checklist to demonstrate that the RWCF Modifications Project is not a "covered action."

Step 1: Determine if the project is exempt from the definition of a "covered action."

The project is not exempt from the definition of a "covered action."

Step 2: Determine if the project meets all four "Screening Criteria."

The project does not meet all four of the "Screening Criteria." The RWCF Modifications Project is a "project" as defined pursuant to Public Resources Code section 21065, would occur within the boundary of the Delta, and would be carried out, approved and funded by a local public agency (City of Stockton). However, the project would not have a significant impact on the achievement of one or both of the coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem, or the implementation of a government-sponsored flood control program. The project is a wastewater treatment plant modifications project, not a water supply, habitat restoration, or flood control project. The objectives of the project are to improve RWCF operations, reduce energy use, and comply with effluent limitations specified in the RWCF National Pollution Discharge Elimination System permit. The project, therefore, would be protective of the Delta's water quality.

Step 3: Determine if the project is covered by one or more Delta Plan regulatory policies.

(The acronyms in the parentheticals below refer to the Delta Plan policy labels in the checklist.)

- The project does not involve the export, transfer, or use of water through the Delta (WR P1).
- The project does not involve water supply or water transfer contracts (WR P2).
- The project would not increase wastewater treatment capacity, thus the project would not significantly affect flow in the Delta (ER P1).
- The project does not involve habitat restoration (ER P2, P3).
- The project does not involve construction or rehabilitation of levees (ER P4).

- The project would not have the reasonable probability of introducing or improving conditions for non-native invasive species (ER P5).
- The project is within the Delta secondary zone boundary shown in the Delta Plan Appendix 6, Figure 6-1, and the City of Stockton sphere of influence shown in Delta Plan Appendix 7, Figure 7-10 (DP P1).
- The project does not involve the siting of water management facilities, ecosystem restoration, or flood management infrastructure (DP P2).
- The project does not involve flood risk management (RR P1).
- The project does not involve residential development (RR P2).
- The project does not encroach on a floodway (RR P3).
- The project does not encroach on the floodplains of the Yolo Bypass, Cosumnes River-Mokelumne River confluence, or the Lower San Joaquin River Floodplain Bypass area (RR P4).

Based on the responses above, per the Covered Action Checklist, the project is not covered by any of the Delta Plan regulatory policies and is therefore exempt from the Delta Stewardship Council's regulatory authority.

5-3 As described in Response to Comment 5-2, the RWCF Modifications Project is exempt from the Delta Stewardship Council's regulatory authority. No revisions to the Draft EIR are necessary.

5-4 As described in Response to Comment 5-2, the RWCF Modifications Project is exempt from the Delta Stewardship Council's regulatory authority. No revisions to the Draft EIR are necessary.

5-5 The availability of Delta Stewardship Council staff to discuss the project is acknowledged.

Letter 6

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

December 12, 2018

Juan Chavez, Project Manager
City of Stockton
2500 Navy Drive
Stockton, California 95206

Dear Mr. Chavez:

This is in response to your request for comments regarding Notice of Availability of Draft Environmental Impact Report for Regional Wastewater Control Facility Modification Project.

Please review the current effective Flood Insurance Rate Maps (FIRMs) for the County of San Joaquin (Community Number 060299), Maps revised October 16, 2009 and City of Stockton (Community Number 060299), Maps revised October 20, 2016. Please note that the City of Stockton, San Joaquin County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

6-1

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

6-2

www.fema.gov

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

6-2 cont.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The Stockton floodplain manager can be reached by calling John Schweigerdt, Deputy Building Official, at (209) 937-8561. The San Joaquin County floodplain manager can be reached by calling John Maguire, Engineering Services Manager, at (209) 953-7617.

6-3

If you have any questions or concerns, please do not hesitate to call Brian Trushinski of the Mitigation staff at (510) 627-7183.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
John Schweigerdt, Deputy Building Official, City of Stockton
John Maguire, Engineering Services Manager, San Joaquin County
Ray Lee, WREA, State of California, Department of Water Resources, North Central Region Office
Brian Trushinski, NFIP Planner, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

Letter 6	U.S. Department of Homeland Security, Federal Emergency Management Agency Region IX Gregor Blackburn, CFM Branch Chief, Floodplain Management and Insurance Branch December 12, 2018

6-1 The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps were reviewed in preparation of the Draft EIR, Section 4.5, "Hydrology and Water Quality," and the City of Stockton FIRMette is cited in "Federal Floodplain Management Policies" of Section 4.5.1, "Regulatory Background." The main plant portion of the RWCF, where the new and modified treatment structures and buildings would be located, is surrounded by levees. As stated on page 4.5-4 of the Draft EIR, because of this levee system, the RWCF main plant is not located within a FEMA-designated floodplain. No revisions to the Draft EIR are necessary.

6-2 This comment notes that the City of Stockton is a participant in the National Flood Insurance Program and details National Flood Insurance Program requirements for building within a riverine floodplain, Regulatory floodway, and Special Flood Hazard Areas. No revisions to the Draft EIR are necessary.

6-3 This comment provides contact information for local floodplain managers, which is acknowledged.

3 REVISIONS TO THE DRAFT EIR

This chapter presents specific text changes made to the Draft EIR since its publication and public review. The changes are presented in the order in which they appear in the original Draft EIR and are identified by the Draft EIR page number. Text deletions are shown in ~~strikethrough~~, and text additions are shown in underline.

The information contained within this chapter clarifies and expands on information in the Draft EIR and does not constitute "significant new information" requiring recirculation. (See Public Resources Code Section 21092.1; CEQA Guidelines Section 15088.5.)

Revisions to Chapter 1, Introduction

To provide clarification, the third paragraph of Section 1.4, Effects Found Not to Be Significant, 1.4.10 Utilities and Service Systems, on page 1-7 of the Draft EIR is revised as follows:

> Water may be used during construction for dust suppression, equipment washing, and for construction crew consumption. Water for dust suppression and equipment washing would be tertiary treated wastewater from the RWCF. Water for construction crew consumption would be from the RWCF potable water supply system, which is supplied by California Water Service Company. Construction crew water consumption (for drinking and washing) would be a small portion of the overall RWCF potable water use and temporary, and thus would not affect the California Water Service Company's ability to provide water for its existing customers. ~~The City of Stockton's projected water demand from 2020 to 2040 ranges from 34,654 acre feet per year (AFY) to 44,465 AFY, while supply ranges from 69,200 to 92,100 AFY for the same period.~~ Therefore, ~~in every year evaluated, there is a projected surplus ranging from 34,546 AFY to 50,351 AFY (City of Stockton 2016). Because the City of Stockton is projected to have a substantial surplus of water supply through 2040,~~ no new or expanded water supply entitlements would be necessary to serve the project.

In response to a comment from Reclamation District 404, the bulleted list of regional and local permits and/or approvals that could be required for the project on page 1-9 of the Draft EIR is revised as follows:

- City of Stockton Fire Department: Above-ground storage permit for the storage of diesel on the project site.
- Reclamation District 404: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 404's levee.
- Reclamation District 524: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 524's levee.
- San Joaquin County Environmental Health Department: Modification to the existing unified program consolidated permit, which covers all hazardous materials programs.

Revisions to Chapter 2, Executive Summary

Since publication of the Draft EIR, the project design was refined to include a 3 megawatt (MW) diesel generator to provide standby power to the RWCF. Section 2.2.3, Project Characteristics, on page 2-5 of the Draft EIR is revised as follows to reflect this change:

OTHER IMPROVEMENTS

- New electrical buildings would be erected
- A new septage station half-roundabout would be constructed
- A new pad would be constructed to discharge and dispose waste from the Vactor trucks
- New roadways within the plant site would be constructed
- New on-site water systems would be installed
- New landscaping would be installed
- A new 3 megawatt diesel generator for standby power would be installed

In response to a comment from Reclamation District 404, the bulleted list of regional and local permits and/or approvals that could be required for the project on page 2-6 of the Draft EIR is revised as follows:

- **City of Stockton Fire Department**: Above-ground storage permit for the storage of diesel on the project site.
- **Reclamation District 404**: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 404's levee.
- **Reclamation District 524**: Encroachment permit for the construction and operation of the new 36-inch force main that would cross through Reclamation District 524's levee.
- **San Joaquin County Environmental Health Department**: Modification to the existing unified program consolidated permit, which covers all hazardous materials programs.

Revisions to Chapter 3, Project Description

Since publication of the Draft EIR, the project design was refined to include a 3 MW diesel generator to provide standby power to the RWCF. Section 3.5.11, Other Modifications, on page 3-35 of the Draft EIR is revised as follows to reflect this change:

Standby Generator

A new standalone 3 MW diesel generator would be installed to provide standby power to the RWCF, which would maintain primary treatment and diversion of flow to the emergency storage ponds.

Revisions to Section 4.2, Air Quality

In response to a comment from the San Joaquin Valley Air Pollution Control District (SJVAPCD), daily emissions were modeled using CalEEMod and compared to the 100 pounds per day screening levels, as suggested by SJVAPCD. Table 4.2-7 is hereby added to the Draft EIR, as follows:

Table 4.2-7 Summary of Modeled Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction Activities (pounds per day)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Demolition, Facility Construction, and Paving	33.4	54.5	4.7	<0.1	20.5	12.1
Worker Commute and Vendor Trips	3.6	2.1	0.5	<0.1	0.9	0.2
Total	37.0	56.6	5.2	0.0	21.3	12.4
SJVAPCD Screening Threshold	100	100	100	100	100	100

Notes: Maximum daily emissions were calculated based on a worst-case day when all proposed construction would overlap.

Source: Modeling conducted by Ascent Environmental 2018.

While conducting the additional emissions modeling, it was discovered that off-gassing emissions associated with architectural coatings were overestimated in the Draft EIR. The overestimate was due to default CalEEMod inputs that assumed all new non-residential facilities would require architectural coatings. Adjustments were made to the modeling to exclude equipment that would not require architectural coating (e.g., stationary equipment, lagoons). Therefore, the following emissions adjustments have been made to Table 4.2-6 of the Draft EIR:

Table 4.2-6 Summary of Modeled Maximum ~~Daily~~ Annual Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction Activities (tons per year)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Demolition, Facility Construction, and Paving	3.5	4.4	~~2.6~~0.3	<0.1	0.5	0.3
Worker Commute and Vendor Trips	0.4	0.2	<0.1	<0.1	0.1	<1
Total	3.9	4.6	~~2.6~~0.3	<0.1	0.6	0.3
SJVAPCD Thresholds of Significance	100	10	10	27	15	15
Federal Conformity Thresholds	100	10	10	100	100	100

Notes: Maximum ~~daily~~ annual emissions were calculated based on a worst-case year when all proposed construction would overlap.

See Appendix B for detail on model inputs, assumptions, and project specific modeling parameters.

Source: Modeling conducted by Ascent Environmental 2018.

Revisions to Section 4.5, Hydrology and Water Quality

To provide clarification, Section 4.5, Hydrology and Water Quality, 4.5.1 Regulatory Background, on page 4.5-4 of the Draft EIR is revised as follows:

Federal Floodplain Management Policies

The Federal Emergency Management Agency (FEMA) is responsible for the management and mapping of "special flood hazard areas," which consist of lands adjacent to streams that are subject to inundation from flood flows that have a statistical probability of occurring once every 100 years. The modeled and mapped area of a stream corridor that is subject to flooding at a 1 percent chance in any given year is known as the 100-year floodplain; accordingly, the areas subject to flooding at 0.5- and 0.2-percent probability levels in a year reflect the defined 200-year and 500-year floodplains, respectively. FEMA operates under CFR Title 44, particularly Section 9.2 (Floodplain Management and Protection of Wetlands) which seeks to avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and destruction/modification of wetlands, promote measures to reduce the risk of flood loss, and restore and preserve the natural and beneficial values served by floodplains. The National Flood Insurance Program provides insurance for development in flood prone areas where local governments pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain, as depicted on FEMA maps. The City of Stockton is a participant in the National Flood Insurance Program and has adopted floodplain management building requirements. The RWCF main plant facilities are not located within a FEMA-designated floodplain as a result of levees that surround the facilities. However, the tertiary plant facilities located west of the San Joaquin River channel are within the 100-year floodplain. (FEMA 2018)

Revisions to Section 4.6, Terrestrial Biological Resources

To provide clarification, Section 4.6, Terrestrial Biological Resources, 4.6.3, Environmental Impacts and Recommended Mitigation Measures, page 4.6-17 (after Significance Criteria) of the Draft EIR is revised as follows:

METHODS AND ASSUMPTIONS

As described in Section 4.6.1, "Terrestrial Biological Resources, Regulatory Background," above, the City of Stockton is a permittee of the SJMSCP (San Joaquin Council of Governments 2000) and has opted for coverage under the SJMSCP for incidental take of covered species associated with future urban growth within the City's service area. As such, the City is required to mitigate for project-related conversion of natural lands and special-status species through in-lieu fees, habitat land dedication, purchase of mitigation bank credits, or by proposing an alternative mitigation plan consistent with the goals of the SJMSCP. The mitigation measures for project-related impacts to species covered by the SJMSCP are intended to be consistent with the goals of the SJMSCP, as required.

The City of Stockton is following the process for SJMSCP coverage for project-related impacts. The City understands that a qualified biologist through SJCOG, Inc. would be dispatched to the project site to conduct a pre-construction biological survey prior to project-related ground disturbance. The information collected during the survey would be used to create the project-specific Incidental Take Minimization Measures (ITMMs). Because this analysis has been prepared to be consistent with the SJMSCP, it is anticipated that the ITMMs would be consistent with the proposed mitigation measures herein. However, because impacts to species covered in the SJMSCP would mitigated through that program, if the ITMMs differ from this analysis, the ITMMs shall supersede the mitigation measures herein.

Revisions to Chapter 10, References

In response to a comment from the San Joaquin Council of Governments, the citation on page 10-17 of the Draft EIR is revised as follows:

San Joaquin Council of Governments, acting as the Airport Land Use Commission. 2018b. *San Joaquin County's Aviation System, Stockton Metropolitan Airport Land Use Compatibility Plan*.

4 REFERENCES

Chapter 1, "Introduction"

City of Stockton. 2007. 2035 General Plan Land Use/Circulation Diagram. December 11, 2007. Available: http://www.stocktongov.com/government/departments/communityDevelop/cdPlanGen.html.

———. 2018b (June). 2040 General Plan Land Use Map. Available: http://www.stocktongov.com/government/departments/communityDevelop/genPlanMap.html.

Chapter 2, "Responses to Comments"

California Air Pollution Control Officers Association. 2018 (August). *Facility Prioritization Guidelines*. Prepared by California Air Pollution Control Officers Association Air Toxics and Risk Managers Committee in consultation with the California Air Resources Board and Office of Environmental Health Hazard Assessment. Available: http://www.capcoa.org/. Accessed January 8th, 2019

CAPCOA. *See* California Air Pollution Control Officers Association.

Chapter 3, "Revisions to the Draft EIR"

None were used in this chapter.

This page intentionally left blank.

5 LIST OF PREPARERS

City of Stockton (Lead Agency)

John Abrew ..... Director, Municipal Utilities Department
Juan Chavez ..... Engineering Manager, Municipal Utilities Department
Even Marcelo ..... Senior Civil Engineer, Municipal Utilities Department
David Kwong ..... Director, Community Development Department

Robertson-Bryan, Inc.

Michael Bryan, Ph.D. ..... Principal-in-Charge, Biologist
Michelle Brown, P.E. ..... Associate Water Resources Engineer
Art O'Brien, P.E. ..... Principal Engineer
Cyle Moon, P.E. ..... Project Engineer

Ascent Environmental, Inc.

Sydney Coatsworth, AICP ..... Principal
Suzanne Enslow ..... Project Manager
Sarah Henningsen ..... Environmental Planner
Kristi Black, J.D. ..... Environmental Planner
Allison Fuller ..... Biologist
Linda Leeman ..... Senior Biologist
Kai Lord-Farmer ..... Air Quality, Climate Change, and Noise Specialist
Dimitri Antoniou, AICP ..... Senior Air Quality, Climate Change, and Noise Specialist
Lisa Kashiwase ..... GIS Specialist
Gayiety Lane ..... Publishing Specialist
Michele Mattei ..... Publishing Specialist
Brian Perry ..... Graphic Artist

Natural Investigations Co., Inc.

Cindy Arrington, M.S., RPA ..... Principal, Archaeological Resources

This page intentionally left blank.

Appendix A

Air Quality and Greenhouse Gases Modeling Data

Project Annual Total Emission	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
	tons/yr										MT/yr					
	0.5555	4.6881	3.9210	0.0014	0.3127	0.2442	0.5569	0.1284	0.2282	0.3567	0.0000	640.3958	640.3958	0.1289	0.0000	936.3

New Facilty, Paving, and Demolition

	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
Year	tons/yr										MT/yr					
2019	0.1598	1.6881	1.0633	1.8700e-003	0.2204	0.0831	0.3035	0.1036	0.0769	0.1806	0.0000	167.0017	167.0017	0.0492	0.0000	168.2318
2020	0.2777	2.5134	2.2072	3.5300e-003	0.0000	0.1463	0.1463	0.0000	0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
2021	0.0632	0.2403	0.2559	4.1000e-004	0.0000	0.0130	0.0130	0.0000	0.0121	0.0121	0.0000	35.3168	35.3168	9.7200e-003	0.0000	35.5599
Maximum	0.2777	2.5134	2.2072	**3.5300e-003**	0.2204	0.1463	0.3035	0.1036	0.1376	0.1806	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Combined One-Year Scenario	0.5	4.4	3.5	0.000	0.2	0.2	0.5	0.1	0.2	0.3	0.0	505.7	505.7	0.1	0.0	509.1

Source: Stockton_RWCF_Annual CalEEMod Modeling

Annual Worker and Truck Trips

	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					
Vendor	7.50E-03	0.2176	0.0463	0.00052	0.0122	0.0012	0.0134	3.51E-03	0.00115	4.66E-03	0	49.4224	49.4224	0.00307	0	160.9
Worker	0.0473	0.0287	0.3483	0.000878109	0.0801	0.0006	0.0807	0.0213	0.0005	0.0218	0.0000	85.2458	85.2458	0.0026	0.0000	266.4
Total	0.0548	0.2463	0.3946	0.001398109	0.0923	0.0018	0.0941	0.0248	0.0016	0.0264	0.0000	134.6682	134.6682	0.0057	0.0000	427.2

Source: Stockton_RWCF_Work and Haul Trip CalEEMod Modeling

Total Project CO2e
936

Summary of Modeled Maximum Daily Emissions of Criteria Air Pollutants and Precursors associated with Project Construction Activities (pounds per day)						
	CO	NO_X	ROG	SO_x	PM_{10}	$PM_{2.5}$
Demolition, Facility Construction, and Paving	33.4	54.5	4.7	<.1	20.5	12.1
Worker Commute and Vendor Trips	3.6	2.1	0.5	<.1	0.9	0.2
Total	37.0	56.6	5.2	0.0	21.3	12.4

New Facilty, Paving, and Demolition

	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
Year	lb/day										lb/day					
2019	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	6,140.0195	6,140.0195	1.9426	0.0000	6,188.5854
2020	2.1198	19.1860	16.8485	0.0269	0.0000	1.1171	1.1171	0.0000	1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229	0.0000	2,568.6345
2021	3.5432	17.4321	16.5752	0.0269	0.0000	0.9586	0.9586	0.0000	0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.7139	0.0000	2,568.7643
Maximum	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	**6,140.0195**	**6,140.0195**	1.9426	0.0000	**6,188.5854**

Annual Worker and Truck Trips

	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	lb/day										lb/day					
Vendor	6.92E-02	1.79E+00	3.81E-01	4.06E-03	9.49E-02	1.39E-02	1.09E-01	2.73E-02	1.33E-02	4.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Worker	0.4365	0.2646	3.2130	0.0081	0.7389	0.0054	0.7443	0.1962	0.0045	0.2007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.5057	2.0566	3.5938	0.01216	0.8338	0.0193	0.8531	0.2235	0.0178	0.2413	0.0000	0.0000	0.0000	0.0000	0.0000	0.0

EXHIBIT 1

	Site Improvements and Demolition	New Influent Pump Station	Personnel Facilities	Aeration Basins and Secondary Clarifiers	Screening and Grit Removal	New Headworks and New Hydrogen Peroxide Facility	Primary Clarifiers	Sludge Dewatering Building	Blower Building	RAS Pump Station	Disk Filters	UV Disinfection	# of facilities being constructed or demolition occuring	Constrcution Worker per Month
Sep-19	1	1	1	1									4	40
Oct-19	1	1	1	1									4	40
Nov-19	1	1	1	1									4	40
Dec-19	1	1	1	1									4	40
Jan-20	1	1	1	1									4	40
Feb-20	1	1	1	1									4	40
Mar-20	1	1	1	1									4	40
Apr-20	1	1	1	1									4	40
May-20	1	1	1	1									4	40
Jun-20	1	1	1	1	1	1							6	90
Jul-20	1	1	1	1	1	1							6	90
Aug-20	1	1	1	1	1	1							6	90
Sep-20	1		1	1	1	1							5	90
Oct-20	1		1	1	1	1							5	90
Nov-20	1		1	1	1	1	1						6	90
Dec-20	1		1	1	1	1	1						6	90
Jan-21	1		1	1	1	1	1						6	90
Feb-21	1		1	1	1	1	1						6	90
Mar-21	1		1	1			1	1					5	90
Apr-21	1		1	1			1	1					5	90
May-21	1		1	1			1	1					5	90
Jun-21	1		1	1			1	1					5	90
Jul-21	1		1	1			1	1					5	90
Aug-21	1		1	1			1	1					5	90
Sep-21	1		1	1			1	1					5	90
Oct-21	1		1	1			1	1					5	90
Nov-21	1		1	1			1	1					5	90
Dec-21	1			1			1	1					4	40
Jan-22	1			1			1	1	1	1	1	1	8	90
Feb-22	1			1			1	1	1	1	1	1	8	90
Mar-22	1						1	1	1	1	1	1	7	90
Apr-22	1							1	1	1	1	1	6	90
May-22	1							1	1	1	1	1	6	90
Jun-22	1							1	1	1	1	1	6	90
Jul-22	1										1	1	3	40
Aug-22	1										1	1	3	40
Sep-22	1										1	1	3	40
Oct-22	1										1	1	3	40
Nov-22	1										1	1	3	40
Dec-22	1										1	1	3	40
Jan-23	1												1	40
Feb-23	1												1	40
Mar-23	1												1	40

Assumed Days Per Week	Worker Commute Trip Length (Miles)(CalEEMod Def	Average (LDA, LDT1) Fuel Efficiecny (Sacramento Region: EMFAC 2011)	Annual Number of Working Days (2020)	Working Day per Month (2020)	Pound to Metric Ton	Daily Vendor Trips	Annual Vendor Trips
5	10.8	22.4	239	23	0.000453592	14	3346

Maximum Daily Worker Trips	Maximum Annual Worker Trips
90	21510

Construction Worker Commute Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	lb/day									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.94E-03	0.1280	0.0272	2.90E-04	6.78E-03	9.90E-04	7.77E-03	1.95E-03	9.50E-04	2.90E-03
Worker	4.85E-03	2.94E-03	0.0357	9.00E-05	8.21E-03	6.00E-05	8.27E-03	2.18E-03	5.00E-05	2.23E-03
Total	**9.79E-03**	0.1309	0.0628	**3.80E-04**	0.0150	**1.05E-03**	0.0160	**4.13E-03**	**1.00E-03**	**5.13E-03**

Source: CalEEMod.2016.3.2 Modeling (2017) based on San Joaquin county commute characterisitcs for daily worker commute (2 trips

Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day					
	0.0000	0.0000	0.0000		0.0000
	30.2346	30.2346	1.90E-03		30.2821
	8.7371	8.7371	2.70E-04		8.7438
	38.9716	38.9716	**2.17E-03**		39.0259

Annual Commute Worker Trip Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Pounds									
12 Month	104.3235	63.2394	767.907	1.9359	176.5971	1.2906	177.8877	46.8918	1.0755	47.9673
	Tons									
12 Month	0.04732	0.02868	0.34832	0.00088	0.08010	0.00059	0.08069	0.02127	0.00049	0.02176

Total Project Construction Worker Commute Emissions

Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Pounds					
0	187935.021	187935.021	5.8077	0	587233.608
Pounds					
0.00000	85.24582	85.24582	0.00263	0.00000	266.36

Annual Vendor Trip Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Pounds									
12 Month	16.52924	428.288	91.0112	0.97034	22.68588	3.31254	25.99842	6.5247	3.1787	9.7034
	Tons									
12 Month	7.50E-03	1.94E-01	4.13E-02	4.40E-04	1.03E-02	1.50E-03	1.18E-02	2.96E-03	1.44E-03	4.40E-03

Total Project Vendor Trip Emissions

Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Pounds					
0	101164.9716	101164.9716	6.3574	0	354633.6731
Pounds					
0.00E+00	4.59E+01	4.59E+01	2.88E-03	0.00E+00	160.858997

Daily Commute Worker Trip Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Pounds									
12 Month	4.37E-01	0.2646	3.213	0.0081	0.7389	0.0054	0.7443	0.1962	0.0045	0.2007
	Tons									
12 Month	0.00020	0.00012	0.00146	0.00000	0.00034	0.00000	0.00034	0.00009	0.00000	0.00009

Daily Commute Worker Trip Emissions

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Pounds									
12 Month	6.92E-02	1.79E+00	3.81E-01	4.06E-03	9.49E-02	1.39E-02	1.09E-01	2.73E-02	1.33E-02	4.06E-02
	Tons									
12 Month	0.00020	0.00012	0.00146	0.00000	0.00034	0.00000	0.00034	0.00009	0.00000	0.00009

Future Emissions Factors	(lbs CO2/MWh)
PG&E Emissions Factor (2016)	294

Source: The Climate Registry - Default Emissions Factors (2016)

Stockton RWCF Project Energy Savings Estimate	
MWh/Yr	2,723
Avoided CO2e MT/Yr	400

Stockton RWCF Project Estimate	Amount	Unit
Estimated Annual Energy Savings	2,723	MWh/Yr

Source: pers. comm Art O'Brien, September 2018

Energy Calculations Summary

Construction Fuel Usage Summary

Construction Phase	Diesel Off-road Equipment (gallons)	Gasoline On-road (gallons)	Diesel On-road (gallons)	Diesel Total
1	44,230	0	4,729	**48,960**
TOTAL	**44,230**	**0**	**4,729**	**48,960**

Total Gasoline	**0**	**gallons**
Total Diesel	**48,960**	**gallons**

Phase 1 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Demolition	Excavators	3	8	158	0.38	20	1,441
Demolition	Concrete/Industrial Saws	1	8	81	0.73	20	473
Demolition	Rubber Tired Dozers	2	8	247	0.4	20	1,581
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	10	1,186
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	10	574
Grading	Excavators	2	8.00	158	0.38	30	1,441
Grading	Rubber Tired Dozers	1	8.00	247	0.40	30	1,186
Grading	Graders	1	8.00	187	0.41	30	920
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	30	861
Grading	Scrapers	2	8.00	367	0.48	30	4,228
Building Construction	Cranes	1	7.00	231	0.29	300	7,034
Building Construction	Forklifts	3	8.00	89	0.20	300	6,408
Building Construction	Generator Sets	1	8.00	84	0.74	300	7,459
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	300	11,305
Building Construction	Welders	1	8.00	46	0.45	300	2,484
Paving	Pavers	2	8.00	130	0.42	20	874
Paving	Rollers	2	8.00	80	0.38	20	486
Paving	Paving Equipment	2	8.00	132	0.36	20	760
Architectural Coating	Air Compressors	1	6.00	78	0.48	20	225
						TOTAL	44,230

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

	Daily Worker Trip	Daily Vendor Trip	Daily Hauling Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	**Total gallons of gasoline**	**Total gallons of diesel**
Annual Worker Commute Trips	90	0	0	239	21510	0	0	10.80	7.30	20.00	232308	0	-	8,810	0
Annual Vendor Trips	0	14	0	239	0	3346	0	10.80	7.30	20.00	0	24425.8	-	0	4,729
													TOTAL	0	4,729

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2019
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
Sacramento	2018	LDA	Aggregated	Aggregated	GAS	268,162	10,789,939	1,252,345	371.3	0.00	29.06	26.37	5.16
Sacramento	2018	LDT1	Aggregated	Aggregated	GAS	27,965	979,828	124,906	39.4	0.00	24.85		
Sacramento	2018	LDT2	Aggregated	Aggregated	GAS	89,217	3,346,701	411,075	148.7	0.00	22.50		
Sacramento	2018	T7 tractor construction	Aggregated	Aggregated	DSL	365	25,580	1,650	0.00	1.86	5.16		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2019
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel_Consum	Fuel (gal/day)	mi/gal	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HTSK
SAN JOAQL	2019	All Other Buses	Aggregated	Aggregatec	DSL	67.48430942	3497.228756	566.8682	0.4171928	417.1928021	8.38276389	0.002135881	1.58034E-05	0	0.002151685	0	0
SAN JOAQL	2019	LDA	Aggregated	Aggregatec	GAS	268162.4469	10789938.79	1252345	371.27614	371276.1402	29.0617619	0.184391885	0	0.48223091	0.666622795	0.11098179	0.199615803
SAN JOAQL	2019	LDA	Aggregated	Aggregatec	DSL	1788.524551	75648.53578	8409.833	1.63335922	1633.359216	46.3146961	0.001528803	0	0	0.001528803	0	0
SAN JOAQL	2019	LDA	Aggregated	Aggregatec	ELEC	2265.265882	85785.72403	11443.27	0	0	#DIV/0!	0	0	0	0	6.08455E-05	6.16578E-05
SAN JOAQL	2019	LDT1	Aggregated	Aggregatec	GAS	27965.43223	979828.1837	124905.9	39.4301986	39430.1986	24.8496893	0.048156204	0	0.087743935	0.135900139	0.030584508	0.046287483
SAN JOAQL	2019	LDT1	Aggregated	Aggregatec	DSL	29.71988527	543.128495	103.885	0.02368513	23.68512884	22.9312029	0.00010928	0	0	0.00010928	0	0
SAN JOAQL	2019	LDT1	Aggregated	Aggregatec	ELEC	28.4842554	1032.020012	141.1895	0	0	#DIV/0!	0	0	0	0	7.65093E-07	7.60747E-07
SAN JOAQL	2019	LDT2	Aggregated	Aggregatec	GAS	89216.58223	3346700.677	411075.4	148.716274	148716.2738	22.5039304	0.092602007	0	0.221584995	0.314187002	0.050335281	0.083203342
SAN JOAQL	2019	LDT2	Aggregated	Aggregatec	DSL	310.567405	14687.16331	1529.022	0.43020861	430.2086149	34.1396309	0.00024752	0	0	0.00024752	0	0
SAN JOAQL	2019	LDT2	Aggregated	Aggregatec	ELEC	294.5642152	9960.079776	1502.197	0	0	#DIV/0!	0	0	0	0	7.91206E-06	8.09403E-06
SAN JOAQL	2019	LHD1	Aggregated	Aggregatec	GAS	8379.943113	272593.1407	124848.7	33.4090503	33409.05031	8.15926038	0.029429258	0.004365014	0.024095645	0.057889917	0.000752188	0.02343958
SAN JOAQL	2019	LHD1	Aggregated	Aggregatec	DSL	8897.868249	309375.2109	111924	17.8077942	17807.79418	17.3730226	0.068169186	0.001076547	0	0.069245733	0	0
SAN JOAQL	2019	LHD2	Aggregated	Aggregatec	GAS	1083.200573	36325.03043	16138.07	5.08434018	5084.34018	7.14449253	0.002739274	0.000563653	0.002785252	0.006088179	8.49403E-05	0.00267327
SAN JOAQL	2019	LHD2	Aggregated	Aggregatec	DSL	2651.678403	96501.51722	33354.78	6.21947469	6219.474691	15.5160238	0.018733006	0.000320825	0	0.019053831	0	0
SAN JOAQL	2019	MCY	Aggregated	Aggregatec	GAS	13390.97104	103723.0325	26781.94	2.79937384	2799.373838	37.0522262	0.271911864	0	0.059498481	0.331410345	0.038156895	0.026245569
SAN JOAQL	2019	MDV	Aggregated	Aggregatec	GAS	92836.17616	3116779.172	420570.4	170.198379	170198.3795	18.3126254	0.118960723	0	0.301438859	0.420399582	0.056227639	0.094751404
SAN JOAQL	2019	MDV	Aggregated	Aggregatec	DSL	1360.050534	59125.18371	6625.75	2.34862692	2348.626918	25.1743618	0.000784778	0	0	0.000784778	0	0
SAN JOAQL	2019	MDV	Aggregated	Aggregatec	ELEC	55.79780868	1926.308111	286.4293	0	0	#DIV/0!	0	0	0	0	1.49874E-06	1.54332E-06
SAN JOAQL	2019	MH	Aggregated	Aggregatec	GAS	1818.652597	14862.81915	181.938	3.20767088	3207.670882	4.63352373	0.001853635	0	3.22404E-05	0.001885875	0.000343502	2.2924E-05
SAN JOAQL	2019	MH	Aggregated	Aggregatec	DSL	637.1876799	5627.710202	63.71877	0.58985067	589.8506676	9.54090673	0.000870596	0	0	0.000870596	0	0
SAN JOAQL	2019	Motor Coach	Aggregated	Aggregatec	DSL	20.11079093	2538.386294	293.6175	0.41721276	417.2127631	6.08415302	0.000826968	0.000147177	0	0.000974145	0	0
SAN JOAQL	2019	OBUS	Aggregated	Aggregatec	GAS	202.5581116	9997.764426	4052.783	2.17917319	2179.173188	4.58787052	0.001688645	0.000165365	0.000972824	0.002826834	1.64639E-05	0.000191593
SAN JOAQL	2019	PTO	Aggregated	Aggregatec	DSL	0	11346.52376	0	2.39482297	2394.822969	4.73793842	0.006930578	0	0	0.006930578	0	0
SAN JOAQL	2019	SBUS	Aggregated	Aggregatec	GAS	32.16063081	1691.28871	128.6425	0.18412247	184.1224715	9.18567243	2.41393E-05	0.000377253	4.14773E-05	0.000442869	7.92964E-07	4.99962E-06
SAN JOAQL	2019	SBUS	Aggregated	Aggregatec	DSL	613.257634	19540.89212	7076.908	2.48995317	2489.953166	7.84789545	0.002322743	0.00020927	0	0.002532013	0	0
SAN JOAQL	2019	T6 Ag	Aggregated	Aggregatec	DSL	92.6266029	1311.580185	407.5571	0.14605891	146.058905	8.97980294	0.001124809	5.22976E-05	0	0.001177107	0	0
SAN JOAQL	2019	T6 CAIRP heavy	Aggregated	Aggregatec	DSL	97.21452075	19504.67269	1419.332	1.8380798	1838.079796	10.6114396	0.001145129	8.03365E-06	0	0.001153163	0	0
SAN JOAQL	2019	T6 CAIRP small	Aggregated	Aggregatec	DSL	51.36869525	2738.051202	749.983	0.27295408	272.9540803	10.0311789	0.000287445	4.95506E-06	0	0.0002924	0	0
SAN JOAQL	2019	T6 instate construction	Aggregated	Aggregatec	DSL	258.7726219	17401.76513	1169.901	2.21171445	2211.714452	7.86799811	0.012461398	6.5008E-05	0	0.012526406	0	0
SAN JOAQL	2019	T6 instate construction	Aggregated	Aggregatec	DSL	1375.312706	69344.93738	6217.735	8.79322636	8793.226362	7.88617676	0.042571513	0.00019556	0	0.042767073	0	0
SAN JOAQL	2019	T6 instate heavy	Aggregated	Aggregatec	DSL	1431.660867	173227.9307	16521.17	18.9964472	18996.44719	9.11896466	0.068977754	0.000250477	0	0.069228231	0	0
SAN JOAQL	2019	T6 instate small	Aggregated	Aggregatec	DSL	2778.734874	131561.16	32066.22	14.7101314	14710.13138	8.94357477	0.040635649	0.000374343	0	0.041009992	0	0
SAN JOAQL	2019	T6 OOS heavy	Aggregated	Aggregatec	DSL	55.68262317	11190.46494	812.9663	1.05458675	1054.586746	10.6112323	0.000669258	4.60697E-06	0	0.000673865	0	0
SAN JOAQL	2019	T6 OOS small	Aggregated	Aggregatec	DSL	29.60172432	1567.625623	432.1852	0.15641231	156.4123091	10.0223929	0.000168911	2.88784E-06	0	0.000171799	0	0
SAN JOAQL	2019	T6 Public	Aggregated	Aggregatec	DSL	447.4874899	7035.164394	1357.379	0.97747009	977.4700941	7.19731932	0.000647814	0.000199003	0	0.000846817	0	0
SAN JOAQL	2019	T6 utility	Aggregated	Aggregatec	DSL	75.22042957	1257.01845	865.0349	0.14786933	147.8693337	8.50087316	4.11452E-05	1.173E-05	0	5.28752E-05	0	0
SAN JOAQL	2019	T6TS	Aggregated	Aggregatec	GAS	563.315306	27642.74202	11270.81	5.94571603	5945.716033	4.64918638	0.006236496	0.00061493	0.003765253	0.010616679	5.94928E-05	0.00192914
SAN JOAQL	2019	T7 Ag	Aggregated	Aggregatec	DSL	60.80483056	979.3980484	267.5413	0.17020433	170.2043321	5.75424865	0.001155914	0.000184968	0	0.001340882	0	0
SAN JOAQL	2019	T7 CAIRP	Aggregated	Aggregatec	DSL	1351.213548	253766.1082	19727.72	39.1609908	39160.99083	6.48007374	0.025643161	0.016037178	0	0.041680339	0	0
SAN JOAQL	2019	T7 CAIRP construction	Aggregated	Aggregatec	DSL	65.88205505	12499.83906	297.8502	2.25288187	2252.881869	5.54837749	0.003002199	0.000116296	0	0.003118496	0	0
SAN JOAQL	2019	T7 NNOOS	Aggregated	Aggregatec	DSL	1516.218964	309362.602	22136.8	46.5032742	46503.2742	6.65249076	0.034053539	0.02314168	0	0.057195219	0	0
SAN JOAQL	2019	T7 NOOS	Aggregated	Aggregatec	DSL	532.2813341	99701.03982	7771.307	15.7335547	15733.55465	6.33684136	0.010270481	0.007882961	0	0.018153442	0	0
SAN JOAQL	2019	T7 other port	Aggregated	Aggregatec	DSL	27.65472955	4462.576749	210.1759	0.83777898	837.7789759	5.3266755	0.001309156	5.0088E-05	0	0.001359244	0	0
SAN JOAQL	2019	T7 POAK	Aggregated	Aggregatec	DSL	150.5944954	16452.84402	1144.518	3.21466034	3214.660344	5.11806607	0.005678865	0.000435504	0	0.006114369	0	0
SAN JOAQL	2019	T7 POLA	Aggregated	Aggregatec	DSL	134.224364	16023.13632	1020.105	3.14618469	3146.184694	5.09287848	0.005530481	0.000483994	0	0.006014474	0	0
SAN JOAQL	2019	T7 Public	Aggregated	Aggregatec	DSL	454.3602091	9190.586739	1378.226	1.79064707	1790.647067	5.13255063	0.001453094	0.000574847	0	0.00202794	0	0
SAN JOAQL	2019	T7 Single	Aggregated	Aggregatec	DSL	818.426268	57143.36163	9444.526	9.59772013	9597.720128	5.95384746	0.023117935	0.002060242	0	0.025178177	0	0
SAN JOAQL	2019	T7 single construction	Aggregated	Aggregatec	DSL	445.9446066	31009.8016	2016.098	5.96148123	5961.481226	5.20169408	0.026878198	0.000945536	0	0.027823733	0	0
SAN JOAQL	2019	T7 SWCV	Aggregated	Aggregatec	DSL	225.0930216	9182.086174	877.8628	3.79640505	3796.405053	2.41862658	0.000294543	0.000313667	0	0.00060821	0	0
SAN JOAQL	2019	T7 SWCV	Aggregated	Aggregatec	NG	33.58829367	1369.771553	130.9943	0.60299392	602.993918	2.27161753	0.001389302	8.95666E-06	0	0.001398259	0	0
SAN JOAQL	2019	T7 tractor	Aggregated	Aggregatec	DSL	2592.376246	364328.0691	32923.18	52.567442	52567.44201	6.93067905	0.081682839	0.005290123	0	0.086972961	0	0
SAN JOAQL	2019	T7 tractor construction	Aggregated	Aggregatec	DSL	364.9578164	25580.35619	1649.96	4.95277067	4952.770673	5.16485779	0.021794368	0.000701027	0	0.022495395	0	0
SAN JOAQL	2019	T7 utility	Aggregated	Aggregatec	DSL	19.53461049	396.468036	224.648	0.07118943	71.18943445	5.56919772	3.5218E-05	1.26205E-05	0	4.78385E-05	0	0
SAN JOAQL	2019	T7IS	Aggregated	Aggregatec	GAS	2.304127235	190.4684481	46.10098	0.0484414	48.44139628	3.93193555	0.000159402	0	7.62874E-08	0.000159479	2.53486E-07	8.20465E-06
SAN JOAQL	2019	UBUS	Aggregated	Aggregatec	GAS	15.44469848	1406.143732	61.77879	0.31861493	318.6149309	4.41330143	2.93953E-05	0	2.96669E-05	5.90622E-05	3.66817E-07	3.94337E-06
SAN JOAQL	2019	UBUS	Aggregated	Aggregatec	DSL	96.76087768	7610.325388	387.0435	1.08511504	1085.115043	7.01338115	5.879E-05	0	0	5.879E-05	0	0
SAN JOAQL	2019	UBUS	Aggregated	Aggregatec	ELEC	2.042727277	124.318219	8.170909	0	0	#DIV/0!	0	0	0	0	0	0
SAN JOAQL	2019	UBUS	Aggregated	Aggregatec	NG	69.09899431	3921.83949	276.396	0.83377319	833.7731885	4.70372464	0.000441239	0	0	0.000441239	0	0

ROG_RUNLS	ROG_RESTL	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HTSK	TOG_RUNLS	TOG_RESTL	TOG_TOTAL	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	NOx_RUNEX	NOx_IDLEX
0	0	0.002151685	0.002431538	1.7991E-05	0	0.002449529	0	0	0	0	0.002449529	0.005353031	0.00017744	0	0.005530467	0.024002665	0.000565742
0.378690023	0.080804605	1.436715017	0.26884153	0	0.527975396	0.796816926	0.11098179	0.199615803	0.378690023	0.080804605	1.566909148	9.859237948	0	3.510722378	13.36996033	0.757487049	0
0	0	0.001528803	0.001740441	0	0	0.001740441	0	0	0	0	0.001740441	0.019051008	0	0	0.019051008	0.01377065	0
0	1.81095E-05	0.000140613	0	0	0	0	6.08455E-05	6.16578E-05	0	1.81095E-05	0.000140613	0	0	0	0	0	0
0.160875836	0.019787393	0.393435359	0.069803112	0	0.096064512	0.165867624	0.030584508	0.046287483	0.160875836	0.019787393	0.423402844	1.964781391	0	0.402718342	2.367499734	0.201386777	0
0	0	0.00010928	0.000124408	0	0	0.000124408	0	0	0	0	0.000124408	0.000756562	0	0	0.000756562	0.000739364	0
0	2.27715E-07	1.75355E-06	0	0	0	0	7.65093E-07	7.60747E-07	0	2.27715E-07	1.75355E-06	0	0	0	0	0	0
0.268225794	0.038424988	0.754376406	0.134163797	0	0.242599263	0.37676306	0.050335281	0.083203342	0.268225794	0.038424988	0.816952464	4.40711487	0	1.514778035	5.921892905	0.507363557	0
0	0	0.00024752	0.000281785	0	0	0.000281785	0	0	0	0	0.000281785	0.001804172	0	0	0.001804172	0.000950198	0
0	2.35487E-06	1.8361E-05	0	0	0	0	7.91206E-06	8.09403E-06	0	2.35487E-06	1.8361E-05	0	0	0	0	0	0
0.157080454	0.000321873	0.239484012	0.041977501	0.006363008	0.026371418	0.074711927	0.000752188	0.02343958	0.157080454	0.000321873	0.256306021	0.543697485	0.03448219	0.272979288	0.851158964	0.118247821	0.000381202
0	0	0.069245733	0.077606086	0.001225577	0	0.078831663	0	0	0	0	0.078831663	0.313873643	0.00892298	0	0.322796621	1.149440191	0.024485731
0.01908649	3.55544E-05	0.027968433	0.003997143	0.00082248	0.003049501	0.007869124	8.49403E-05	0.00267327	0.01908649	3.55544E-05	0.029749378	0.051357319	0.00446479	0.035164283	0.090986394	0.014709996	4.9243E-05
0	0	0.019053831	0.021326282	0.000365238	0	0.02169152	0	0	0	0	0.02169152	0.084408867	0.00265916	0	0.087068028	0.265514466	0.007242861
0.070198546	0.019888673	0.485900028	0.328346953	0	0.064699111	0.393046064	0.038156895	0.026245569	0.070198546	0.019888673	0.547535747	2.704501536	0	0.261852261	2.966353797	0.137395151	0
0.289050881	0.045451926	0.905881432	0.167652782	0	0.329995225	0.497648007	0.056227639	0.094751404	0.289050881	0.045451926	0.983129858	4.858824441	0	1.935975559	6.7948	0.60045879	0
0	0	0.000784778	0.000893418	0	0	0.000893418	0	0	0	0	0.000893418	0.011766129	0	0	0.011766129	0.005182394	0
0	4.4607E-07	3.48813E-06	0	0	0	0	1.49874E-06	1.54332E-06	0	4.4607E-07	3.48813E-06	0	0	0	0	0	0
0.000519004	9.6095E-05	0.0028674	0.00266758	0	3.52881E-05	0.002702868	0.000343502	2.2924E-05	0.000519004	9.6095E-05	0.003684393	0.049005073	0	0.000682535	0.049687608	0.010784781	0
0	0	0.000870596	0.000991116	0	0	0.000991116	0	0	0	0	0.000991116	0.003267026	0	0	0.003267026	0.035494658	0
0	0	0.000974145	0.00094144	0.00016755	0	0.00110899	0	0	0	0	0.00110899	0.002659868	0.0012322	0	0.003892071	0.015745987	0.002238024
0.002124632	5.50806E-06	0.005165031	0.002413475	0.000240634	0.00106378	0.003717889	1.64639E-05	0.000191593	0.002124632	5.50806E-06	0.006056086	0.038798271	0.00127907	0.018513059	0.058590399	0.011009873	1.44122E-05
0	0	0.006930578	0.007889936	0	0	0.007889936	0	0	0	0	0.007889936	0.023642344	0	0	0.023642344	0.106394899	0
3.76107E-05	3.00892E-07	0.000486573	3.5224E-05	0.000550486	4.54124E-05	0.000631123	7.92964E-07	4.99962E-06	3.76107E-05	3.00892E-07	0.000674827	0.000379564	0.00291552	0.00106971	0.004364797	0.000259303	3.28464E-05
0	0	0.002532013	0.002644266	0.000238239	0	0.002882504	0	0	0	0	0.002882504	0.006098066	0.00379265	0	0.009890719	0.145808254	0.029458406
0	0	0.001177107	0.00128051	5.95369E-05	0	0.001340047	0	0	0	0	0.001340047	0.00291696	0.00038813	0	0.003305092	0.013638986	0.001005536
0	0	0.001153163	0.001303643	9.1457E-06	0	0.001312788	0	0	0	0	0.001312788	0.004387709	0.00021306	0	0.004600771	0.03670713	0.00050529
0	0	0.0002924	0.000327234	5.64096E-06	0	0.000332875	0	0	0	0	0.000332875	0.001047721	0.00011692	0	0.001164639	0.006293989	0.000300237
0	0	0.012526406	0.014186353	7.40066E-05	0	0.014260359	0	0	0	0	0.014260359	0.024091094	0.00068207	0	0.024773163	0.121729301	0.002164758
0	0	0.042767073	0.048464427	0.00022263	0	0.048687057	0	0	0	0	0.048687057	0.090857094	0.0033047	0	0.094161797	0.374500459	0.011173088
0	0	0.069228231	0.078525923	0.000285149	0	0.078811072	0	0	0	0	0.078811072	0.179503428	0.00324945	0	0.182752876	1.012935063	0.012470701
0	0	0.041009992	0.046260593	0.000426161	0	0.046686754	0	0	0	0	0.046686754	0.114002669	0.00666358	0	0.120666253	0.558038273	0.021256226
0	0	0.000673865	0.000761899	5.24469E-06	0	0.000767144	0	0	0	0	0.000767144	0.002596604	0.00012329	0	0.002719893	0.020724013	0.000286635
0	0	0.000171799	0.000192292	3.28758E-06	0	0.00019558	0	0	0	0	0.00019558	0.000616381	6.7509E-05	0	0.00068389	0.003646984	0.000174687
0	0	0.000846817	0.000737486	0.00022655	0	0.000964037	0	0	0	0	0.000964037	0.001713109	0.00334762	0	0.005060732	0.045759938	0.018097143
0	0	5.28752E-05	4.68407E-05	1.33537E-05	0	6.01944E-05	0	0	0	0	6.01944E-05	0.000172791	0.00038776	0	0.000560554	0.002824993	0.001065499
0.011215982	2.45723E-05	0.023845867	0.008976351	0.000894875	0.004118797	0.013990024	5.94928E-05	0.00192914	0.011215982	2.45723E-05	0.027219211	0.145769237	0.00920674	0.079685534	0.234661512	0.032882895	5.39105E-05
0	0	0.001340882	0.00131592	0.000210572	0	0.001526492	0	0	0	0	0.001526492	0.003923556	0.0008025	0	0.004726054	0.015870112	0.001696877
0	0	0.041680339	0.029192787	0.018257106	0	0.047449893	0	0	0	0	0.047449893	0.107368957	0.19105797	0	0.298426928	0.997730506	0.199063141
0	0	0.003118496	0.003417775	0.000132395	0	0.00355017	0	0	0	0	0.00355017	0.011627317	0.00145982	0	0.013087142	0.072708607	0.001614891
0	0	0.057195219	0.038767362	0.026345041	0	0.065112403	0	0	0	0	0.065112403	0.146082716	0.27055989	0	0.416642607	1.05694187	0.253534456
0	0	0.018153442	0.011692161	0.008974151	0	0.020666312	0	0	0	0	0.020666312	0.042760592	0.09326493	0	0.136025517	0.39375312	0.097276972
0	0	0.001359244	0.001490375	5.70214E-05	0	0.001547396	0	0	0	0	0.001547396	0.00452949	0.00050451	0	0.005034004	0.030123998	0.000899703
0	0	0.006114369	0.006464955	0.000495788	0	0.006960744	0	0	0	0	0.006960744	0.018666303	0.00438663	0	0.023052934	0.121040629	0.007822712
0	0	0.006014474	0.006296031	0.00055099	0	0.006847021	0	0	0	0	0.006847021	0.018177838	0.00487504	0	0.02305288	0.117866454	0.008693697
0	0	0.00202794	0.001654236	0.000654419	0	0.002308655	0	0	0	0	0.002308655	0.00505309	0.00489605	0	0.009949138	0.11034088	0.017592704
0	0	0.025178177	0.026318009	0.002345428	0	0.028663438	0	0	0	0	0.028663438	0.072736491	0.01942262	0	0.092159112	0.415904315	0.028456729
0	0	0.027823733	0.030598782	0.00107642	0	0.031675202	0	0	0	0	0.031675202	0.061475668	0.0079158	0	0.069391464	0.310280323	0.012764879
0	0	0.00060821	0.000335314	0.000357086	0	0.0006924	0	0	0	0	0.0006924	0.000823338	0.00282377	0	0.003647105	0.092070943	0.011463526
0	0	0.001398259	0.011594703	8.09626E-05	0	0.011675665	0	0	0	0	0.011675665	0.011287902	0.00073789	0	0.012025789	0.015611417	0.001632929
0	0	0.086972961	0.092989694	0.006022402	0	0.099012096	0	0	0	0	0.099012096	0.293890689	0.05672789	0	0.350618579	2.13921207	0.080734221
0	0	0.022495395	0.024811229	0.000798065	0	0.025609294	0	0	0	0	0.025609294	0.05230608	0.00680268	0	0.059108758	0.24318622	0.010335386
0	0	4.78385E-05	4.0093E-05	1.43675E-05	0	5.44604E-05	0	0	0	0	5.44604E-05	0.00013677	0.00014372	0	0.000280487	0.002184894	0.000305259
4.0085E-05	1.20935E-07	0.000208143	0.0002326	0	8.35251E-08	0.000232683	2.53486E-07	8.20465E-06	4.0085E-05	1.20935E-07	0.000281347	0.00889234	0	0.000140888	0.009033228	0.001078362	0
2.4482E-05	1.89228E-07	8.80436E-05	4.28935E-05	0	3.24816E-05	7.53751E-05	3.66817E-07	3.94337E-06	2.4482E-05	1.89228E-07	0.000104357	0.000507108	0	0.000458821	0.000965929	0.000411964	0
0	0	5.879E-05	0.000772664	0	0	0.000772664	0	0	0	0	0.000772664	0.002879944	0	0	0.002879944	0.032769188	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.000441239	0.021385338	0	0	0.021385338	0	0	0	0	0.021385338	0.153875495	0	0	0.153875495	0.002429859	0

NOx_STREX	NOx_TOTEX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL
0.000582356	0.025150764	4.63079354	0.050295063	0	4.681088603	9.92062E-05	7.34029E-07	0	9.99402E-05	0.000801183	4.71887E-06	0	0.000805901	4.62604E-05	0.000502465	0.001354627
0.351336312	1.108823362	3433.951128	0	83.48018708	3517.431315	0.045087421	0	0.10068925	0.145776671	0.017816537	0	0.002993888	0.020810425	0.095150973	0.43709978	0.553061178
0	0.01377065	18.32701612	0	0	18.32701612	7.101E-05	0	0	7.101E-05	0.000912787	0	0	0.000912787	0.000667106	0.003064518	0.00464441
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000756501	0.003475175	0.004231675
0.055451909	0.256838686	363.6077821	0	9.949794802	373.5575769	0.010512033	0	0.016252629	0.026764662	0.002692799	0	0.000488344	0.003181143	0.008640606	0.039692782	0.05151453
0	0.000739364	0.265757669	0	0	0.265757669	5.07585E-06	0	0	5.07585E-06	8.69697E-05	0	0	8.69697E-05	4.78957E-06	2.20021E-05	0.000113761
0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.10086E-06	4.18071E-05	5.09079E-05
0.200308091	0.707671648	1372.634677	0	36.28774452	1408.922421	0.021401939	0	0.044512934	0.065914874	0.005882552	0	0.001002941	0.006885492	0.029512848	0.135574646	0.171972986
0	0.000950198	4.827131807	0	0	4.827131807	1.14968E-05	0	0	1.14968E-05	0.000120823	0	0	0.000120823	0.000129519	0.000594976	0.000845317
0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.78329E-05	0.000403482	0.000491315
0.082257132	0.200886155	312.6614904	1.145975014	2.706382525	316.5138479	0.005648784	0.001148858	0.004596087	0.011393729	0.000815601	0	7.59797E-05	0.000891581	0.00240386	0.022968882	0.026264323
0	1.173925922	198.4322644	1.37909856	0	199.811363	0.003166328	5.00036E-05	0	0.003216332	0.012469386	0.000276303	0	0.012745688	0.004092334	0.026068165	0.042906187
0.010320303	0.025079541	47.60330806	0.170534542	0.394664413	48.16850701	0.000575184	0.000151407	0.000541786	0.001268378	9.62698E-05	0	7.71014E-06	0.00010398	0.000320332	0.0035709	0.003995212
0	0.272757327	69.12880464	0.65646478	0	69.78526942	0.000870112	1.49017E-05	0	0.000885014	0.003234503	8.14834E-05	0	0.003315987	0.001276497	0.009486497	0.01407898
0.007916002	0.145311153	24.64137572	0	1.879599195	26.52097491	0.039061598	0	0.007773065	0.046834663	0.000200922	0	9.86353E-05	0.000299558	0.00045734	0.00134458	0.002101478
0.258101429	0.858560219	1566.680486	0	45.76115787	1612.441643	0.025812384	0	0.057286406	0.083098791	0.005421688	0	0.001090743	0.006512431	0.027485287	0.126260539	0.160258258
0	0.005182394	26.35263755	0	0	26.35263755	3.64515E-05	0	0	3.64515E-05	0.000426075	0	0	0.000426075	0.000521395	0.002395158	0.003342628
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.69871E-05	7.80346E-05	9.50218E-05
6.53139E-05	0.010850095	30.38363501	0	0.00550338	30.38913839	0.000396475	0	7.07192E-06	0.000403547	3.46635E-05	0	9.22082E-08	3.47557E-05	0.000196601	0.002135419	0.002366776
0	0.035494658	6.618386568	0	0	6.618386568	4.04375E-05	0	0	4.04375E-05	0.000913501	0	0	0.000913501	9.92558E-05	0.000808563	0.001821319
0.000418212	0.018402224	4.431213124	0.250099451	0	4.681312575	3.84105E-05	6.83598E-06	0	4.52465E-05	0.000391027	1.2133E-05	0	0.00040316	3.35771E-05	0.000364703	0.00080144
0.001722893	0.012747179	20.426814	0.086666761	0.131778071	20.64525883	0.000332064	4.21391E-05	0.000169272	0.000543475	1.30681E-05	0	1.92754E-06	1.49956E-05	0.000132248	0.001436431	0.001583675
0	0.106394899	26.87097776	0	0	26.87097776	0.000321907	0	0	0.000321907	0.002195708	0	0	0.002195708	0	0	0.002195708
8.39005E-05	0.00037605	1.644240972	0.09337443	0.006741633	1.744357035	5.71009E-06	8.92553E-05	7.63771E-06	0.000102603	1.43044E-06	0	4.70122E-08	1.47746E-06	1.49146E-05	0.00138855	0.001404943
0.005338431	0.180605091	25.37428159	2.564099253	0	27.93838084	0.000107885	9.72007E-06	0	0.000117605	0.000944535	3.66048E-05	0	0.00098114	0.000258482	0.016043101	0.017282723
0.000210242	0.014854765	1.572026433	0.066819377	0	1.63884581	5.22445E-05	2.42909E-06	0	5.46736E-05	0.000696307	1.75412E-05	0	0.000713848	1.73492E-05	0.000188442	0.000919639
0.001578588	0.038791007	20.55464722	0.06942478	0	20.624072	5.31883E-05	3.73142E-07	0	5.35614E-05	0.000859943	1.32218E-06	0	0.000861265	0.000258003	0.002802339	0.003921607
0.000783527	0.007377753	3.025704555	0.036961503	0	3.062666058	1.33511E-05	2.3015E-07	0	1.35812E-05	0.000215388	1.00267E-06	0	0.00021639	3.62182E-05	0.00039339	0.000645999
0.001426717	0.125320776	24.62437194	0.192046903	0	24.81641884	0.0005788	3.01945E-06	0	0.000581819	0.003888586	1.93801E-05	0	0.003907967	0.000230186	0.002500203	0.006638356
0.009399015	0.395072563	97.63305393	1.030852795	0	98.66390672	0.001977337	9.08326E-06	0	0.00198642	0.013011233	5.53217E-05	0	0.013066554	0.000917277	0.009963152	0.023946982
0.01549142	1.040897184	212.0632747	1.085303148	0	213.1485778	0.003203838	1.1634E-05	0	0.003215472	0.029428918	7.28368E-05	0	0.029501755	0.002291413	0.024888567	0.056681735
0.04173127	0.621025769	162.9780489	2.076161065	0	165.05421	0.001887421	1.73873E-05	0	0.001904808	0.017987986	0.000102148	0	0.018090134	0.001740256	0.018902083	0.038732474
0.000910644	0.021921292	11.79318125	0.0397506	0	11.83293185	3.10853E-05	2.13982E-07	0	3.12993E-05	0.000509328	7.58706E-07	0	0.000510087	0.000148025	0.001607793	0.002265904
0.000448593	0.004270263	1.733696084	0.02131952	0	1.755015604	7.84547E-06	1.34133E-07	0	7.9796E-06	0.000126886	5.93035E-07	0	0.000127479	2.07361E-05	0.000225229	0.000373445
0.002119169	0.06597625	9.289955503	1.677693255	0	10.96764876	3.00893E-05	9.24319E-06	0	3.93325E-05	0.000296858	4.34752E-05	0	0.000340333	9.30593E-05	0.001010779	0.001444171
0.001398997	0.005289489	1.509083024	0.1500766	0	1.659159624	1.91109E-06	5.44828E-07	0	2.45592E-06	1.27628E-05	5.06498E-07	0	1.32693E-05	1.66275E-05	0.000180602	0.000210499
0.004945119	0.037881925	55.44280426	0.342486509	0.543800982	56.32909175	0.001174417	0.000147617	0.000617198	0.001939232	5.83885E-05	0	1.09907E-05	6.93792E-05	0.000365651	0.003971578	0.004406608
0.000207072	0.017774061	1.792940188	0.116828042	0	1.90976823	5.36892E-05	8.59129E-06	0	6.22805E-05	0.000672086	2.8056E-05	0	0.000700142	3.88657E-05	6.66546E-05	0.000805662
0.037564041	1.234357688	400.6870441	38.71667275	0	439.4037169	0.001191058	0.000744885	0	0.001935944	0.016175532	0.000476545	0	0.016652077	0.010070253	0.017270484	0.043992814
0.001166682	0.07549018	24.9890776	0.289257949	0	25.27833555	0.000139444	5.40167E-06	0	0.000144846	0.000773523	2.02813E-06	0	0.000775551	0.000496034	0.000850698	0.002122283
0.04364814	1.354124467	471.5736009	50.21379755	0	521.7873984	0.001581699	0.001074871	0	0.00265657	0.022918673	0.001043404	0	0.023962077	0.0122765	0.021054198	0.057292775
0.014759201	0.505789293	157.5787833	18.9586905	0	176.5374738	0.000477037	0.000366143	0	0.00084318	0.006448941	0.000242511	0	0.006691452	0.003956457	0.006785324	0.017433233
0.000227168	0.031250869	9.254891873	0.145360472	0	9.400252345	6.08069E-05	2.32646E-06	0	6.31334E-05	0.000170576	3.02588E-07	0	0.000170878	0.000177089	0.000303708	0.000651676
0.001237049	0.130100391	34.80604076	1.263876609	0	36.06991737	0.000263769	2.0228E-05	0	0.000283997	0.000706248	2.63093E-06	0	0.000708879	0.000652902	0.001119726	0.002481507
0.001102578	0.127662729	33.89699283	1.404597326	0	35.30159015	0.000256877	2.24802E-05	0	0.000279357	0.000687735	2.92386E-06	0	0.000690659	0.000635849	0.001090482	0.00241699
0.00334724	0.131280824	18.43286437	1.658991334	0	20.0918557	6.74924E-05	2.67001E-05	0	9.41926E-05	0.000672295	4.62774E-05	0	0.000718572	0.000364712	0.000625481	0.001708765
0.019180197	0.463541241	103.737128	3.953556265	0	107.6906842	0.001073768	9.56929E-05	0	0.001169461	0.009497989	0.000129496	0	0.009627485	0.002267632	0.003888989	0.015784105
0.004728853	0.327774056	65.30543969	1.585028422	0	66.89046811	0.001248423	4.39177E-05	0	0.00129234	0.007716532	7.64839E-05	0	0.007793016	0.001230568	0.002110425	0.011134009
0.002022425	0.105556894	41.54098457	1.056366921	0	42.59735149	1.36807E-05	1.4569E-05	0	2.82498E-05	0.000159245	1.82527E-05	0	0.000177498	0.000364375	0.000624902	0.001166775
0	0.017244347	5.051599173	0.165299496	0	5.216898669	0.009968954	7.04551E-05	0	0.010039409	3.52021E-05	8.21063E-06	0	4.34128E-05	5.43569E-05	9.32221E-05	0.000190992
0.039767498	2.259713788	577.3664694	12.46358629	0	589.8300557	0.003793956	0.000245712	0	0.004039669	0.046254182	0.000186203	0	0.046440385	0.014457706	0.024794966	0.085693057
0.0045569	0.258078506	54.08260753	1.48967999	0	55.57228752	0.001012292	3.25609E-05	0	0.001044853	0.005209128	3.54189E-05	0	0.005244547	0.001015111	0.001740915	0.008000572
0.000504524	0.002994678	0.75998938	0.038787705	0	0.798777085	1.63578E-06	5.86188E-07	0	2.22197E-06	8.44619E-06	2.21952E-07	0	8.66814E-06	1.57331E-05	2.69823E-05	5.13836E-05
3.40601E-07	0.001078702	0.45664067	0	0.002288051	0.458928721	2.93456E-05	0	1.45767E-08	2.93602E-05	3.27017E-07	0	5.00761E-08	3.77094E-07	4.19911E-06	1.29627E-05	1.75389E-05
5.48002E-05	0.000466764	3.013076322	0	0.005448205	3.018524527	9.03009E-06	0	7.02028E-06	1.60504E-05	1.35109E-06	0	1.67471E-08	1.36784E-06	1.65432E-05	0.000180862	0.000198773
0	0.032769188	12.17547291	0	0	12.17547291	0.000703472	0	0	0.000703472	5.99458E-05	0	0	5.99458E-05	0.000224025	0.000735877	0.001019848
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.64445E-06	1.78615E-05	1.95059E-05
0	0.002429859	7.21352257	0	0	7.21352257	0.020795817	0	0	0.020795817	1.66779E-05	0	0	1.66779E-05	0.000106007	0.000393068	0.000515753

PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_STREX	PM2_5_TOTEX	PM2_5_PMTW	PM2_5_PMBW	PM2_5_TOTAL	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	Fuel Consumption2
0.000766524	4.51473E-06	0	0.000771039	1.15651E-05	0.000215342	0.000997946	4.37494E-05	4.75163E-07	0	4.42246E-05	0.000727896	7.90568E-06	0	0.000735802	0.417192802
0.016382197	0	0.002753123	0.01913532	0.023787743	0.187328477	0.23025154	0.03398173	0	0.000826104	0.034807834	0.073835743	0	0.042302103	0.116137847	371.2761402
0.0008733	0	0	0.0008733	0.000166776	0.001313365	0.002353441	0.000173256	0	0	0.000173256	0.002880752	0	0	0.002880752	1.633359216
0	0	0	0	0.000189125	0.001489361	0.001678486	0	0	0	0	0	0	0	0	0
0.002476483	0	0.000449178	0.002925661	0.002160151	0.017011192	0.022097005	0.003598194	0	9.84613E-05	0.003696655	0.0138533	0	0.005031725	0.018885025	39.4301986
8.32074E-05	0	0	8.32074E-05	1.19739E-06	9.42947E-06	9.38343E-05	2.51237E-06	0	0	2.51237E-06	4.17734E-05	0	0	4.17734E-05	0.023685129
0	0	0	0	2.27521E-06	1.79173E-05	2.01925E-05	0	0	0	0	0	0	0	0	0
0.005409895	0	0.000922495	0.00633239	0.007378212	0.05810342	0.071814022	0.013583333	0	0.000359097	0.01394243	0.036779737	0	0.018847432	0.055627169	148.7162738
0.000115596	0	0	0.000115596	3.23797E-05	0.00025499	0.000402965	4.56338E-05	0	0	4.56338E-05	0.000758758	0	0	0.000758758	0.430208615
0	0	0	0	2.19582E-05	0.000172921	0.000194879	0	0	0	0	0	0	0	0	0
0.000750727	0	7.00979E-05	0.000820825	0.000600965	0.009843807	0.011265597	0.003094039	1.13404E-05	2.67818E-05	0.003132161	0.006776738	2.8002E-05	0.005978961	0.012783702	33.40905031
0.011929965	0.00026435	0	0.012194316	0.001023083	0.011172071	0.02438947	0.001875899	1.30374E-05	0	0.001888936	0.031190789	0.000216775	0	0.031407564	17.80779418
8.85166E-05	0	7.08919E-06	9.56057E-05	8.0083E-05	0.001530386	0.001706075	0.000471073	1.68758E-06	3.90552E-06	0.000476666	0.000874003	3.67825E-06	0.000757342	0.001635023	5.08434018
0.00309458	7.79584E-05	0	0.003172539	0.000319124	0.004065642	0.007557304	0.000653516	6.20595E-06	0	0.000659722	0.010866085	0.000103187	0	0.010969273	6.219474691
0.000188781	0	9.33377E-05	0.000282119	0.000114335	0.000576249	0.000972702	0.000243846	0	1.86002E-05	0.000262447	0.007817742	0	0.000444196	0.008261937	2.799373838
0.004989523	0	0.001004212	0.005993735	0.006871322	0.05411166	0.066976717	0.015503573	0	0.000452844	0.015956417	0.042300264	0	0.021561533	0.063861796	170.1983795
0.000407643	0	0	0.000407643	0.000130349	0.001026496	0.001564488	0.000249127	0	0	0.000249127	0.004142268	0	0	0.004142268	2.348626918
0	0	0	0	4.24678E-06	3.34434E-05	3.76902E-05	0	0	0	0	0	0	0	0	0
3.18946E-05	0	8.49687E-08	3.19796E-05	4.91504E-05	0.00091518	0.00099631	0.000300671	0	5.44604E-08	0.000300725	0.000592066	0	6.23182E-06	0.000598298	3.207670882
0.000873983	0	0	0.000873983	2.4814E-05	0.000346527	0.001245324	6.25676E-05	0	0	6.25676E-05	0.001040318	0	0	0.001040318	0.589850668
0.000374111	1.16081E-05	0	0.00038572	8.39428E-06	0.000156301	0.000550415	4.18639E-05	2.36282E-06	0	4.42267E-05	0.000696525	3.93122E-05	0	0.000735837	0.417212763
1.20447E-05	0	1.79367E-06	1.38384E-05	3.30619E-05	0.000615613	0.000662514	0.00020214	8.57638E-07	1.30405E-06	0.000204302	0.000483792	1.08885E-06	0.000115011	0.000599891	2.179173188
0.002100723	0	0	0.002100723	0	0	0.002100723	0.000253864	0	0	0.000253864	0.004223744	0	0	0.004223744	2.394822969
1.31524E-06	0	4.32259E-08	1.35847E-06	3.72865E-06	0.000595093	0.00060018	1.62711E-05	9.24016E-07	6.67139E-08	1.72618E-05	2.56856E-05	3.27844E-06	8.31148E-06	3.72755E-05	0.184122472
0.000903675	3.50213E-05	0	0.000938696	6.46204E-05	0.006875615	0.007878931	0.000239724	2.42243E-05	0	0.000263948	0.003988484	0.000403041	0	0.004391524	2.489953166
0.000666185	1.67824E-05	0	0.000682967	4.33731E-06	8.07607E-05	0.000768065	1.48517E-05	6.31276E-07	0	1.5483E-05	0.000247101	1.05031E-05	0	0.000257604	0.146058905
0.000822742	1.26499E-06	0	0.000824007	6.45007E-05	0.001201002	0.00208951	0.00019419	6.55891E-07	0	0.000194846	0.003230904	1.09126E-05	0	0.003241817	1.838079796
0.00020607	9.59296E-07	0	0.000207029	9.05455E-06	0.000168596	0.00038468	2.85854E-05	3.49194E-07	0	2.89346E-05	0.000475599	5.80983E-06	0	0.000481408	0.27295408
0.003720368	1.85418E-05	0	0.00373891	5.75465E-05	0.001071516	0.004867972	0.000232639	1.81436E-06	0	0.000234453	0.003870608	3.01871E-05	0	0.003900795	2.211714452
0.012448372	5.29285E-05	0	0.012501301	0.000229319	0.004269922	0.017000542	0.000922389	9.73899E-06	0	0.000932128	0.015346556	0.000162036	0	0.015508592	8.793226362
0.028155836	6.96859E-05	0	0.028225522	0.000572853	0.010666529	0.039464904	0.002003469	1.02534E-05	0	0.002013722	0.033333394	0.000170595	0	0.033503988	18.99644719
0.017209834	9.77287E-05	0	0.017307563	0.000435064	0.008100893	0.02584352	0.001539736	1.96145E-05	0	0.00155935	0.02561788	0.000326344	0	0.025944223	14.71013138
0.000487295	7.25884E-07	0	0.00048802	3.70061E-05	0.000689054	0.001214081	0.000111416	3.75544E-07	0	0.000111792	0.001853724	6.24824E-06	0	0.001859972	1.054586746
0.000121397	5.67381E-07	0	0.000121965	5.18403E-06	9.65267E-05	0.000223675	1.63791E-05	2.01416E-07	0	1.65805E-05	0.000272513	3.35113E-06	0	0.000275864	0.156412309
0.000284016	4.15944E-05	0	0.00032561	2.32648E-05	0.000433191	0.000782066	8.77669E-05	1.585E-05	0	0.000103617	0.001460252	0.00026371	0	0.001723962	0.977470094
1.22107E-05	4.84587E-07	0	1.26953E-05	4.15688E-06	7.7401E-05	9.42532E-05	1.42571E-05	1.41785E-06	0	1.56749E-05	0.000237207	2.359E-05	0	0.000260797	0.147869334
5.37634E-05	0	1.0163E-05	6.39264E-05	9.14127E-05	0.001702105	0.001857444	0.000548651	3.38918E-06	5.38135E-06	0.000557422	0.001409118	3.8312E-06	0.00032293	0.001735879	5.945716033
0.000643012	2.68423E-05	0	0.000669854	9.71641E-06	2.85663E-05	0.000708137	1.69388E-05	1.10373E-06	0	1.80425E-05	0.000281825	1.83637E-05	0	0.000300189	0.170204332
0.015475786	0.00045593	0	0.015931716	0.002517563	0.007401636	0.025850915	0.003785493	0.000365776	0	0.004151268	0.062982423	0.006085722	0	0.069068145	39.16099083
0.000740061	1.94039E-06	0	0.000742001	0.000124008	0.000364585	0.001230594	0.000236084	2.73277E-06	0	0.000238817	0.003927935	4.54673E-05	0	0.003973402	2.252881869
0.021927221	0.000998267	0	0.022925488	0.003069125	0.009023228	0.035017841	0.004455194	0.000474395	0	0.004929589	0.074124803	0.00789291	0	0.082017713	46.5032742
0.006169963	0.00023202	0	0.006401983	0.000989114	0.002907996	0.010299093	0.001488726	0.000179112	0	0.001667839	0.02476919	0.002980042	0	0.027749232	15.73355465
0.000163197	2.89498E-07	0	0.000163486	4.42723E-05	0.000130161	0.000337919	8.74356E-05	1.37329E-06	0	8.88089E-05	0.00145474	2.28486E-05	0	0.001477589	0.837778976
0.000675696	2.51712E-06	0	0.000678213	0.000163225	0.000479883	0.001321321	0.00032883	1.19405E-05	0	0.000340771	0.005471025	0.000198664	0	0.005669689	3.214660344
0.000657984	2.79738E-06	0	0.000660782	0.000158962	0.000467349	0.001287093	0.000320242	1.32699E-05	0	0.000333512	0.005328135	0.000220783	0	0.005548918	3.146184694
0.000643212	4.42755E-05	0	0.000687487	9.1178E-05	0.000268063	0.001046728	0.000174145	1.56733E-05	0	0.000189818	0.00289739	0.00026077	0	0.00315816	1.790647067
0.00908711	0.000123894	0	0.009211004	0.000566908	0.001666709	0.011444621	0.000980057	3.73512E-05	0	0.001017408	0.016306032	0.000621444	0	0.016927476	9.597720128
0.007382718	7.31753E-05	0	0.007455894	0.000307642	0.000904468	0.008668004	0.000616973	1.49746E-05	0	0.000631948	0.010265106	0.000249144	0	0.01051425	5.961481226
0.000152356	1.74631E-05	0	0.000169819	9.10937E-05	0.000267815	0.000528728	0.000392459	9.98003E-06	0	0.000402439	0.006529664	0.000166046	0	0.00669571	3.796405053
3.36793E-05	7.85544E-06	0	4.15348E-05	1.35892E-05	3.99523E-05	9.50763E-05	0	0	0	0	0.001029802	3.36974E-05	0	0.001063499	0.602993918
0.044253246	0.000178148	0	0.044431394	0.003614427	0.010626414	0.058672235	0.005454672	0.00011775	0	0.005572422	0.090753969	0.001959102	0	0.092713071	52.56744201
0.004983784	3.38867E-05	0	0.00501767	0.000253778	0.000746106	0.006017554	0.000510946	1.40738E-05	0	0.000525019	0.008501033	0.000234157	0	0.00873519	4.952770673
8.08081E-06	2.12351E-07	0	8.29316E-06	3.93328E-06	1.15638E-05	2.37903E-05	7.18E-06	3.66447E-07	0	7.54645E-06	0.00011946	6.09689E-06	0	0.000125557	0.071189434
3.0068E-07	0	4.60431E-08	3.46724E-07	1.04978E-06	5.55542E-06	6.95192E-06	4.51883E-06	0	2.26421E-08	4.54147E-06	3.57522E-05	0	1.66593E-08	3.57688E-05	0.048441396
1.24228E-06	0	1.53984E-08	1.25768E-06	4.1358E-06	7.75125E-05	8.2906E-05	2.98168E-05	0	5.39144E-08	2.98707E-05	3.55198E-05	0	4.83439E-06	4.03542E-05	0.318614931
5.73525E-05	0	0	5.73525E-05	5.60063E-05	0.000315376	0.000428735	0.000115102	0	0	0.000115102	0.001913815	0	0	0.001913815	1.085115043
0	0	0	0	4.11112E-07	7.65491E-06	8.06602E-06	0	0	0	0	0	0	0	0	0
1.59564E-05	0	0	1.59564E-05	2.65018E-05	0.000168458	0.000210916	0	0	0	0	0.001470524	0	0	0.001470524	0.833773189

Stockton_RWCF_Work and Haul Trip

San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 1 Work and 1 Haul Trip Estimate

Land Use -

Construction Phase - 1 Work and 1 Haul Trip Estimate

Trips and VMT - 1 Work and 1 Haul Trip Estimate

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	1.00
tblConstructionPhase	PhaseEndDate	2/5/2020	9/19/2019
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2019	0.9673	9.9516	7.6060	0.0118	0.0150	0.6064	0.6214	4.1300e-003	0.5579	0.5621	0.0000	1,166.6413	1,166.6413	0.3590	0.0000	1,175.6151
Maximum	**0.9673**	**9.9516**	**7.6060**	**0.0118**	**0.0150**	**0.6064**	**0.6214**	**4.1300e-003**	**0.5579**	**0.5621**	**0.0000**	**1,166.6413**	**1,166.6413**	**0.3590**	**0.0000**	**1,175.6151**

Mitigated Construction

	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
Year	lb/day										lb/day					
2019	0.9673	9.9516	7.6060	0.0118	0.0150	0.6064	0.6214	4.1300e-003	0.5579	0.5621	0.0000	1,166.6413	1,166.6413	0.3590	0.0000	1,175.6151
Maximum	**0.9673**	**9.9516**	**7.6060**	**0.0118**	**0.0150**	**0.6064**	**0.6214**	**4.1300e-003**	**0.5579**	**0.5621**	**0.0000**	**1,166.6413**	**1,166.6413**	**0.3590**	**0.0000**	**1,175.6151**

Stockton_RWCF_Work and Haul Trip - San Joaquin County, Summer

	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	N20	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

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	lb/day										lb/day					
Area	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438
Mobile	0.0167	0.0958	0.1744	6.2000e-004	0.0433	6.2000e-004	0.0439	0.0116	5.8000e-004	0.0122		62.8331	62.8331	2.9400e-003		62.9065
Total	**0.0425**	**0.1009**	**0.1787**	**6.5000e-004**	**0.0433**	**1.0000e-003**	**0.0443**	**0.0116**	**9.6000e-004**	**0.0126**		**68.8414**	**68.8414**	**3.0600e-003**	**1.1000e-004**	**68.9505**

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	lb/day										lb/day					
Area	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438
Mobile	0.0167	0.0958	0.1744	6.2000e-004	0.0433	6.2000e-004	0.0439	0.0116	5.8000e-004	0.0122		62.8331	62.8331	2.9400e-003		62.9065
Total	**0.0425**	**0.1009**	**0.1787**	**6.5000e-004**	**0.0433**	**1.0000e-003**	**0.0443**	**0.0116**	**9.6000e-004**	**0.0126**		**68.8414**	**68.8414**	**3.0600e-003**	**1.1000e-004**	**68.9505**

	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	N20	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	Building Construction	Building Construction	9/19/2019	9/19/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

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
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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
Building Construction	5	1.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

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	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

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	lb/day										lb/day					
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
Vendor	4.9400e-003	0.1280	0.0272	2.9000e-004	6.7800e-003	9.9000e-004	7.7700e-003	1.9500e-003	9.5000e-004	2.9000e-003		30.2346	30.2346	1.9000e-003		30.2821
Worker	4.8500e-003	2.9400e-003	0.0357	9.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.7371	8.7371	2.7000e-004		8.7438
Total	**9.7900e-003**	**0.1309**	**0.0628**	**3.8000e-004**	**0.0150**	**1.0500e-003**	**0.0160**	**4.1300e-003**	**1.0000e-003**	**5.1300e-003**		**38.9716**	**38.9716**	**2.1700e-003**		**39.0259**

3.2 Building Construction - 2019

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	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

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	lb/day										lb/day					
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
Vendor	4.9400e-003	0.1280	0.0272	2.9000e-004	6.7800e-003	9.9000e-004	7.7700e-003	1.9500e-003	9.5000e-004	2.9000e-003		30.2346	30.2346	1.9000e-003		30.2821
Worker	4.8500e-003	2.9400e-003	0.0357	9.0000e-005	8.2100e-003	6.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.7371	8.7371	2.7000e-004		8.7438
Total	**9.7900e-003**	**0.1309**	**0.0628**	**3.8000e-004**	**0.0150**	**1.0500e-003**	**0.0160**	**4.1300e-003**	**1.0000e-003**	**5.1300e-003**		**38.9716**	**38.9716**	**2.1700e-003**		**39.0259**

4.0 Operational Detail - Mobile

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	lb/day										lb/day					
Mitigated	0.0167	0.0958	0.1744	6.2000e-004	0.0433	6.2000e-004	0.0439	0.0116	5.8000e-004	0.0122		62.8331	62.8331	2.9400e-003		62.9065
Unmitigated	0.0167	0.0958	0.1744	6.2000e-004	0.0433	6.2000e-004	0.0439	0.0116	5.8000e-004	0.0122		62.8331	62.8331	2.9400e-003		62.9065

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	6.97	1.32	0.68	15,369	15,369
Total	6.97	1.32	0.68	15,369	15,369

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Light 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 Light Industry	0.546554	0.037008	0.181258	0.129446	0.020679	0.005026	0.016032	0.054515	0.001184	0.001555	0.005196	0.000618	0.000931

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	lb/day										lb/day					
NaturalGas Mitigated	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438
NaturalGas Unmitigated	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438

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	lb/day										lb/day					
General Light Industry	51.0685	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438
Total		**5.5000e-004**	**5.0100e-003**	**4.2100e-003**	**3.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**		**6.0081**	**6.0081**	**1.2000e-004**	**1.1000e-004**	**6.0438**

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	lb/day										lb/day					
General Light Industry	0.0510685	5.5000e-004	5.0100e-003	4.2100e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		6.0081	6.0081	1.2000e-004	1.1000e-004	6.0438
Total		**5.5000e-004**	**5.0100e-003**	**4.2100e-003**	**3.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**		**6.0081**	**6.0081**	**1.2000e-004**	**1.1000e-004**	**6.0438**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0252	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	lb/day										lb/day					
Architectural Coating	3.8100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0252**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	lb/day										lb/day					
Architectural Coating	3.8100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0252**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Stockton_RWCF_Annual

San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	296.16	1000sqft	6.80	296,155.00	0
Parking Lot	3.66	Acre	3.66	159,386.04	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - New facility and paving information provided by applicant

Trips and VMT - Worker commute and haul trips calcualted separately

Demolition - Demolition information provided by client

Architectural Coating - Emissions modeled for Light Industrial and Parking Lot land uses. Adjusted to exclude architectural coating for Light Industril uses based on type of facilities to be developed as part of the RWCF.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	0.00
tblLandUse	LandUseSquareFeet	296,160.00	296,155.00
tblLandUse	LandUseSquareFeet	159,429.60	159,386.04
tblTripsAndVMT	VendorTripNumber	75.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	191.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	38.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2019	0.1598	1.6881	1.0633	1.8700e-003	0.2204	0.0831	0.3035	0.1036	0.0769	0.1806	0.0000	167.0017	167.0017	0.0492	0.0000	168.2318
2020	0.2777	2.5134	2.2072	3.5300e-003	0.0000	0.1463	0.1463	0.0000	0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
2021	0.0632	0.2403	0.2559	4.1000e-004	0.0000	0.0130	0.0130	0.0000	0.0121	0.0121	0.0000	35.3168	35.3168	9.7200e-003	0.0000	35.5599
Maximum	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**	**0.2204**	**0.1463**	**0.3035**	**0.1036**	**0.1376**	**0.1806**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2019	0.1598	1.6881	1.0633	1.8700e-003	0.2204	0.0831	0.3035	0.1036	0.0769	0.1806	0.0000	167.0015	167.0015	0.0492	0.0000	168.2316
2020	0.2777	2.5134	2.2072	3.5300e-003	0.0000	0.1463	0.1463	0.0000	0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
2021	0.0632	0.2403	0.2559	4.1000e-004	0.0000	0.0130	0.0130	0.0000	0.0121	0.0121	0.0000	35.3167	35.3167	9.7200e-003	0.0000	35.5599
Maximum	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**	**0.2204**	**0.1463**	**0.3035**	**0.1036**	**0.1376**	**0.1806**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

Stockton_RWCF_Annual - San Joaquin County, Annual

	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	N20	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2019**	**11-30-2019**	1.5843	1.5843
2	**12-1-2019**	**2-29-2020**	0.7161	0.7161
3	**3-1-2020**	**5-31-2020**	0.7001	0.7001
4	**6-1-2020**	**8-31-2020**	0.7001	0.7001
5	**9-1-2020**	**11-30-2020**	0.6924	0.6924
6	**12-1-2020**	**2-28-2021**	0.5150	0.5150
7	**3-1-2021**	**5-31-2021**	0.0217	0.0217
		Highest	1.5843	1.5843

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	1.3764	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Energy	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	1,038.8231	1,038.8231	0.0393	0.0124	1,043.4898
Mobile	0.4312	2.7360	4.9912	0.0216	1.7102	0.0144	1.7246	0.4584	0.0135	0.4719	0.0000	1,995.6061	1,995.6061	0.0775	0.0000	1,997.5431
Waste						0.0000	0.0000		0.0000	0.0000	74.5464	0.0000	74.5464	4.4056	0.0000	184.6856
Water						0.0000	0.0000		0.0000	0.0000	21.7278	107.8069	129.5347	2.2365	0.0537	201.4512
Total	**1.8374**	**3.0067**	**5.2212**	**0.0233**	**1.7102**	**0.0350**	**1.7452**	**0.4584**	**0.0341**	**0.4925**	**96.2742**	**3,142.2414**	**3,238.5156**	**6.7589**	**0.0661**	**3,427.1753**

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	1.3764	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Energy	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	1,038.8231	1,038.8231	0.0393	0.0124	1,043.4898
Mobile	0.4312	2.7360	4.9912	0.0216	1.7102	0.0144	1.7246	0.4584	0.0135	0.4719	0.0000	1,995.6061	1,995.6061	0.0775	0.0000	1,997.5431
Waste						0.0000	0.0000		0.0000	0.0000	74.5464	0.0000	74.5464	4.4056	0.0000	184.6856
Water						0.0000	0.0000		0.0000	0.0000	21.7278	107.8069	129.5347	2.2365	0.0537	201.4512
Total	**1.8374**	**3.0067**	**5.2212**	**0.0233**	**1.7102**	**0.0350**	**1.7452**	**0.4584**	**0.0341**	**0.4925**	**96.2742**	**3,142.2414**	**3,238.5156**	**6.7589**	**0.0661**	**3,427.1753**

	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	N20	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	Demolition	Demolition	9/1/2019	9/27/2019	5	20	
2	Site Preparation	Site Preparation	9/28/2019	10/11/2019	5	10	
3	Grading	Grading	10/12/2019	11/22/2019	5	30	
4	Building Construction	Building Construction	11/23/2019	1/15/2021	5	300	
5	Paving	Paving	1/16/2021	2/12/2021	5	20	
6	Architectural Coating	Architectural Coating	2/13/2021	3/12/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 3.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 444,233; Non-Residential Outdoor: 148,078; Striped Parking Area: 9,563 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8672**

3.2 Demolition - 2019

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	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
Total	**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**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8671**

3.2 Demolition - 2019

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	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
Total	**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**

3.3 Site Preparation - 2019

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.3 Site Preparation - 2019

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	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
Total	**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**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.3 Site Preparation - 2019

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	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
Total	**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**

3.4 Grading - 2019

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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.1301**	**0.0357**	**0.1658**	**0.0540**	**0.0329**	**0.0868**	**0.0000**	**83.5520**	**83.5520**	**0.0264**	**0.0000**	**84.2129**

3.4 Grading - 2019

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	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
Total	**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**

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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.1301**	**0.0357**	**0.1658**	**0.0540**	**0.0329**	**0.0868**	**0.0000**	**83.5519**	**83.5519**	**0.0264**	**0.0000**	**84.2128**

3.4 Grading - 2019

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	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
Total	**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**

3.5 Building Construction - 2019

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	0.0319	0.2846	0.2317	3.6000e-004		0.0174	0.0174		0.0164	0.0164	0.0000	31.7391	31.7391	7.7300e-003	0.0000	31.9324
Total	**0.0319**	**0.2846**	**0.2317**	**3.6000e-004**		**0.0174**	**0.0174**		**0.0164**	**0.0164**	**0.0000**	**31.7391**	**31.7391**	**7.7300e-003**	**0.0000**	**31.9324**

3.5 Building Construction - 2019

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	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
Total	**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**

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	0.0319	0.2846	0.2317	3.6000e-004		0.0174	0.0174		0.0164	0.0164	0.0000	31.7390	31.7390	7.7300e-003	0.0000	31.9323
Total	**0.0319**	**0.2846**	**0.2317**	**3.6000e-004**		**0.0174**	**0.0174**		**0.0164**	**0.0164**	**0.0000**	**31.7390**	**31.7390**	**7.7300e-003**	**0.0000**	**31.9323**

3.5 Building Construction - 2019

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	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
Total	**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**

3.5 Building Construction - 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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

3.5 Building Construction - 2020

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	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
Total	**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**

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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

3.5 Building Construction - 2020

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	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
Total	**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**

3.5 Building Construction - 2021

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	0.0105	0.0959	0.0912	1.5000e-004		5.2700e-003	5.2700e-003		4.9600e-003	4.9600e-003	0.0000	12.7401	12.7401	3.0700e-003	0.0000	12.8169
Total	**0.0105**	**0.0959**	**0.0912**	**1.5000e-004**		**5.2700e-003**	**5.2700e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**12.7401**	**12.7401**	**3.0700e-003**	**0.0000**	**12.8169**

3.5 Building Construction - 2021

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	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
Total	**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**

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	0.0105	0.0959	0.0912	1.5000e-004		5.2700e-003	5.2700e-003		4.9600e-003	4.9600e-003	0.0000	12.7400	12.7400	3.0700e-003	0.0000	12.8169
Total	**0.0105**	**0.0959**	**0.0912**	**1.5000e-004**		**5.2700e-003**	**5.2700e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**12.7400**	**12.7400**	**3.0700e-003**	**0.0000**	**12.8169**

3.5 Building Construction - 2021

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	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
Total	**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**

3.6 Paving - 2021

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	4.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

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	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
Total	**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**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	4.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

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	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
Total	**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**

3.7 Architectural Coating - 2021

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					
Archit. Coating	0.0332					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.0354**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	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
Total	**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**

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					
Archit. Coating	0.0332					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.0354**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	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
Total	**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**

4.0 Operational Detail - Mobile

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	0.4312	2.7360	4.9912	0.0216	1.7102	0.0144	1.7246	0.4584	0.0135	0.4719	0.0000	1,995.6061	1,995.6061	0.0775	0.0000	1,997.5431
Unmitigated	0.4312	2.7360	4.9912	0.0216	1.7102	0.0144	1.7246	0.4584	0.0135	0.4719	0.0000	1,995.6061	1,995.6061	0.0775	0.0000	1,997.5431

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	2,064.24	390.93	201.39	4,551,725	4,551,725
Parking Lot	0.00	0.00	0.00		
Total	2,064.24	390.93	201.39	4,551,725	4,551,725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
Parking Lot	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

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	744.2373	744.2373	0.0337	6.9600e-003	747.1535
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	744.2373	744.2373	0.0337	6.9600e-003	747.1535
NaturalGas Mitigated	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.5858	294.5858	5.6500e-003	5.4000e-003	296.3364
NaturalGas Unmitigated	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.5858	294.5858	5.6500e-003	5.4000e-003	296.3364

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 Light Industry	5.52033e+006	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.5858	294.5858	5.6500e-003	5.4000e-003	296.3364
Parking Lot	0	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
Total		**0.0298**	**0.2706**	**0.2273**	**1.6200e-003**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**294.5858**	**294.5858**	**5.6500e-003**	**5.4000e-003**	**296.3364**

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 Light Industry	5.52033e+006	0.0298	0.2706	0.2273	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.5858	294.5858	5.6500e-003	5.4000e-003	296.3364
Parking Lot	0	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
Total		**0.0298**	**0.2706**	**0.2273**	**1.6200e-003**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**294.5858**	**294.5858**	**5.6500e-003**	**5.4000e-003**	**296.3364**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.50251e+006	728.0088	0.0329	6.8100e-003	730.8613
Parking Lot	55785.1	16.2285	7.3000e-004	1.5000e-004	16.2921
Total		**744.2373**	**0.0337**	**6.9600e-003**	**747.1535**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.50251e+006	728.0088	0.0329	6.8100e-003	730.8613
Parking Lot	55785.1	16.2285	7.3000e-004	1.5000e-004	16.2921
Total		**744.2373**	**0.0337**	**6.9600e-003**	**747.1535**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	1.3764	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Unmitigated	1.3764	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-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	0.2092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Total	**1.3764**	**3.0000e-005**	**2.7500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

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	0.2092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.3600e-003	5.3600e-003	1.0000e-005	0.0000	5.7100e-003
Total	**1.3764**	**3.0000e-005**	**2.7500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.3600e-003**	**5.3600e-003**	**1.0000e-005**	**0.0000**	**5.7100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	129.5347	2.2365	0.0537	201.4512
Unmitigated	129.5347	2.2365	0.0537	201.4512

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	68.487 / 0	129.5347	2.2365	0.0537	201.4512
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**129.5347**	**2.2365**	**0.0537**	**201.4512**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	68.487 / 0	129.5347	2.2365	0.0537	201.4512
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**129.5347**	**2.2365**	**0.0537**	**201.4512**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	74.5464	4.4056	0.0000	184.6856
Unmitigated	74.5464	4.4056	0.0000	184.6856

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	367.24	74.5464	4.4056	0.0000	184.6856
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**74.5464**	**4.4056**	**0.0000**	**184.6856**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	367.24	74.5464	4.4056	0.0000	184.6856
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**74.5464**	**4.4056**	**0.0000**	**184.6856**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Stockton_RWCF_Annual

San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	296.16	1000sqft	6.80	296,155.00	0
Parking Lot	3.66	Acre	3.66	159,386.04	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - New facility and paving information provided by applicant

Trips and VMT - Worker commute and haul trips calcualted separately

Demolition - Demolition information provided by client

Architectural Coating - Emissions modeled for Light Industrial and Parking Lot land uses. Adjusted to exclude architectural coating for Light Industril uses based on type of facilities to be developed as part of the RWCF.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	0.00
tblLandUse	LandUseSquareFeet	296,160.00	296,155.00
tblLandUse	LandUseSquareFeet	159,429.60	159,386.04
tblTripsAndVMT	VendorTripNumber	75.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	191.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	38.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2019	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	6,140.0195	6,140.0195	1.9426	0.0000	6,188.5854
2020	2.1198	19.1860	16.8485	0.0269	0.0000	1.1171	1.1171	0.0000	1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229	0.0000	2,568.6345
2021	3.5432	17.4321	16.5752	0.0269	0.0000	0.9586	0.9586	0.0000	0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.7139	0.0000	2,568.7643
Maximum	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**	**0.0000**	**6,188.5854**

Mitigated Construction

	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
Year	lb/day										lb/day					
2019	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	6,140.0195	6,140.0195	1.9426	0.0000	6,188.5854
2020	2.1198	19.1860	16.8485	0.0269	0.0000	1.1171	1.1171	0.0000	1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229	0.0000	2,568.6345
2021	3.5432	17.4321	16.5752	0.0269	0.0000	0.9586	0.9586	0.0000	0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.7139	0.0000	2,568.7643
Maximum	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**	**0.0000**	**6,188.5854**

Stockton_RWCF_Annual - San Joaquin County, Summer

	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	N20	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

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	lb/day										lb/day					
Area	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Energy	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Mobile	3.7560	19.4487	39.4242	0.1671	12.8237	0.1048	12.9285	3.4287	0.0979	3.5266		16,975.0141	16,975.0141	0.6233		16,990.5966
Total	**11.4625**	**20.9317**	**40.7003**	**0.1760**	**12.8237**	**0.2176**	**13.0413**	**3.4287**	**0.2107**	**3.6394**		**18,754.3962**	**18,754.3962**	**0.6576**	**0.0326**	**18,780.5565**

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	lb/day										lb/day					
Area	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Energy	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Mobile	3.7560	19.4487	39.4242	0.1671	12.8237	0.1048	12.9285	3.4287	0.0979	3.5266		16,975.0141	16,975.0141	0.6233		16,990.5966
Total	**11.4625**	**20.9317**	**40.7003**	**0.1760**	**12.8237**	**0.2176**	**13.0413**	**3.4287**	**0.2107**	**3.6394**		**18,754.3962**	**18,754.3962**	**0.6576**	**0.0326**	**18,780.5565**

	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	N20	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	Demolition	Demolition	9/1/2019	9/27/2019	5	20	
2	Site Preparation	Site Preparation	9/28/2019	10/11/2019	5	10	
3	Grading	Grading	10/12/2019	11/22/2019	5	30	
4	Building Construction	Building Construction	11/23/2019	1/15/2021	5	300	
5	Paving	Paving	1/16/2021	2/12/2021	5	20	
6	Architectural Coating	Architectural Coating	2/13/2021	3/12/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 3.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 444,233; Non-Residential Outdoor: 148,078; Striped Parking Area: 9,563 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.4 Grading - 2019

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 2019

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	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 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	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 2021

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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.6 Paving - 2021

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	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.4795					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7350**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.4795					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7350**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
Archit. Coating	3.3243					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**3.5432**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Archit. Coating	3.3243					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**3.5432**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

4.0 Operational Detail - Mobile

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	lb/day										lb/day					
Mitigated	3.7560	19.4487	39.4242	0.1671	12.8237	0.1048	12.9285	3.4287	0.0979	3.5266		16,975.0141	16,975.0141	0.6233		16,990.5966
Unmitigated	3.7560	19.4487	39.4242	0.1671	12.8237	0.1048	12.9285	3.4287	0.0979	3.5266		16,975.0141	16,975.0141	0.6233		16,990.5966

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	2,064.24	390.93	201.39	4,551,725	4,551,725
Parking Lot	0.00	0.00	0.00		
Total	2,064.24	390.93	201.39	4,551,725	4,551,725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
Parking Lot	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

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	lb/day										lb/day					
NaturalGas Mitigated	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
NaturalGas Unmitigated	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900

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	lb/day										lb/day					
General Light Industry	15124.2	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Parking Lot	0	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
Total		**0.1631**	**1.4828**	**1.2455**	**8.9000e-003**		**0.1127**	**0.1127**		**0.1127**	**0.1127**		**1,779.3164**	**1,779.3164**	**0.0341**	**0.0326**	**1,789.8900**

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	lb/day										lb/day					
General Light Industry	15.1242	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Parking Lot	0	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
Total		**0.1631**	**1.4828**	**1.2455**	**8.9000e-003**		**0.1127**	**0.1127**		**0.1127**	**0.1127**		**1,779.3164**	**1,779.3164**	**0.0341**	**0.0326**	**1,789.8900**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Unmitigated	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699

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	lb/day										lb/day					
Architectural Coating	1.1465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Total	**7.5435**	**2.8000e-004**	**0.0306**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0656**	**0.0656**	**1.7000e-004**		**0.0699**

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	lb/day										lb/day					
Architectural Coating	1.1465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Total	**7.5435**	**2.8000e-004**	**0.0306**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0656**	**0.0656**	**1.7000e-004**		**0.0699**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Stockton_RWCF_Annual

San Joaquin County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	296.16	1000sqft	6.80	296,155.00	0
Parking Lot	3.66	Acre	3.66	159,386.04	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - New facility and paving information provided by applicant

Trips and VMT - Worker commute and haul trips calcualted separately

Demolition - Demolition information provided by client

Architectural Coating - Emissions modeled for Light Industrial and Parking Lot land uses. Adjusted to exclude architectural coating for Light Industril uses based on type of facilities to be developed as part of the RWCF.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	0.00
tblLandUse	LandUseSquareFeet	296,160.00	296,155.00
tblLandUse	LandUseSquareFeet	159,429.60	159,386.04
tblTripsAndVMT	VendorTripNumber	75.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	191.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	38.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2019	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	6,140.0195	6,140.0195	1.9426	0.0000	6,188.5854
2020	2.1198	19.1860	16.8485	0.0269	0.0000	1.1171	1.1171	0.0000	1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229	0.0000	2,568.6345
2021	3.5432	17.4321	16.5752	0.0269	0.0000	0.9586	0.9586	0.0000	0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.7139	0.0000	2,568.7643
Maximum	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**	**0.0000**	**6,188.5854**

Mitigated Construction

	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
Year	lb/day										lb/day					
2019	4.7389	54.5202	33.3768	0.0620	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	6,140.0195	6,140.0195	1.9426	0.0000	6,188.5854
2020	2.1198	19.1860	16.8485	0.0269	0.0000	1.1171	1.1171	0.0000	1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229	0.0000	2,568.6345
2021	3.5432	17.4321	16.5752	0.0269	0.0000	0.9586	0.9586	0.0000	0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.7139	0.0000	2,568.7643
Maximum	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**	**0.0000**	**6,188.5854**

Stockton_RWCF_Annual - San Joaquin County, Winter

	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	N20	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

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	lb/day										lb/day					
Area	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Energy	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Mobile	3.0064	20.1715	37.1695	0.1538	12.8237	0.1053	12.9290	3.4287	0.0984	3.5271		15,631.7259	15,631.7259	0.6407		15,647.7432
Total	**10.7129**	**21.6545**	**38.4456**	**0.1627**	**12.8237**	**0.2181**	**13.0418**	**3.4287**	**0.2112**	**3.6399**		**17,411.1079**	**17,411.1079**	**0.6750**	**0.0326**	**17,437.7031**

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	lb/day										lb/day					
Area	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Energy	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Mobile	3.0064	20.1715	37.1695	0.1538	12.8237	0.1053	12.9290	3.4287	0.0984	3.5271		15,631.7259	15,631.7259	0.6407		15,647.7432
Total	**10.7129**	**21.6545**	**38.4456**	**0.1627**	**12.8237**	**0.2181**	**13.0418**	**3.4287**	**0.2112**	**3.6399**		**17,411.1079**	**17,411.1079**	**0.6750**	**0.0326**	**17,437.7031**

	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	N20	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	Demolition	Demolition	9/1/2019	9/27/2019	5	20	
2	Site Preparation	Site Preparation	9/28/2019	10/11/2019	5	10	
3	Grading	Grading	10/12/2019	11/22/2019	5	30	
4	Building Construction	Building Construction	11/23/2019	1/15/2021	5	300	
5	Paving	Paving	1/16/2021	2/12/2021	5	20	
6	Architectural Coating	Architectural Coating	2/13/2021	3/12/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 3.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 444,233; Non-Residential Outdoor: 148,078; Striped Parking Area: 9,563 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.4 Grading - 2019

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 2019

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	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 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	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.5 Building Construction - 2021

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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.6 Paving - 2021

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	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.4795					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7350**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.4795					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7350**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
Archit. Coating	3.3243					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**3.5432**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

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	lb/day										lb/day					
Archit. Coating	3.3243					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**3.5432**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	lb/day										lb/day					
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
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
Worker	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
Total	**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**

4.0 Operational Detail - Mobile

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	lb/day										lb/day					
Mitigated	3.0064	20.1715	37.1695	0.1538	12.8237	0.1053	12.9290	3.4287	0.0984	3.5271		15,631.7259	15,631.7259	0.6407		15,647.7432
Unmitigated	3.0064	20.1715	37.1695	0.1538	12.8237	0.1053	12.9290	3.4287	0.0984	3.5271		15,631.7259	15,631.7259	0.6407		15,647.7432

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	2,064.24	390.93	201.39	4,551,725	4,551,725
Parking Lot	0.00	0.00	0.00		
Total	2,064.24	390.93	201.39	4,551,725	4,551,725

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
Parking Lot	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

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	lb/day										lb/day					
NaturalGas Mitigated	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
NaturalGas Unmitigated	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900

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	lb/day										lb/day					
General Light Industry	15124.2	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Parking Lot	0	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
Total		**0.1631**	**1.4828**	**1.2455**	**8.9000e-003**		**0.1127**	**0.1127**		**0.1127**	**0.1127**		**1,779.3164**	**1,779.3164**	**0.0341**	**0.0326**	**1,789.8900**

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	lb/day										lb/day					
General Light Industry	15.1242	0.1631	1.4828	1.2455	8.9000e-003		0.1127	0.1127		0.1127	0.1127		1,779.3164	1,779.3164	0.0341	0.0326	1,789.8900
Parking Lot	0	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
Total		**0.1631**	**1.4828**	**1.2455**	**8.9000e-003**		**0.1127**	**0.1127**		**0.1127**	**0.1127**		**1,779.3164**	**1,779.3164**	**0.0341**	**0.0326**	**1,789.8900**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Unmitigated	7.5435	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699

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	lb/day										lb/day					
Architectural Coating	1.1465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Total	**7.5435**	**2.8000e-004**	**0.0306**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0656**	**0.0656**	**1.7000e-004**		**0.0699**

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	lb/day										lb/day					
Architectural Coating	1.1465					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0306	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0656	0.0656	1.7000e-004		0.0699
Total	**7.5435**	**2.8000e-004**	**0.0306**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0656**	**0.0656**	**1.7000e-004**		**0.0699**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EXHIBIT 1

Name — Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in grey areas.			
Author or updater	Matthew Cegielski	*Last Update*	August 20, 2018	
Facility:				
ID#:				
Project #:				
Unit and Process#	1-0 p1			
Operating Hours hr/yr	10,945.7			

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	3.30E+02	3.92E-01	0.00E+00	3.30E+02
100≤R<250	**0.250**	8.25E+01	9.79E-02	0.00E+00	8.25E+01
250≤R<500	**0.040**	1.32E+01	1.57E-02	0.00E+00	1.32E+01
500≤R<1000	**0.011**	3.63E+00	4.31E-03	0.00E+00	3.63E+00
1000≤R<1500	**0.003**	9.90E-01	1.18E-03	0.00E+00	9.90E-01
1500≤R<2000	**0.002**	6.60E-01	7.83E-04	0.00E+00	6.60E-01
2000<R	**0.001**	3.30E-01	3.92E-04	0.00E+00	3.30E-01

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

1-0 p1

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.43E+02	1.31E-02	1.31E-02	3.30E+02	3.92E-01	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**3.30E+02**	**3.92E-01**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Wood preservatives (containing arsenic and chromate)	1206

EXHIBIT 1

Unit and Process#	1-0 p2				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

1-0 p2	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Zinc	7440666

Unit and Process#	2-0 p1				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

2-0 p1	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Hexane	110543

EXHIBIT 1

Unit and Process#	2-0 p2				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

2-0 p2	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Barium	7440393

Receptor Proximity and Proximity Factors		1-0 p1	1-0 p2	2-0 p1	2-0 p2	
		Max Score	**Max Score**	**Max Score**	**Max Score**	**Total Max Score**
0< R<100	**1.000**	3.30E+02	0.00E+00	0.00E+00	0.00E+00	3.30E+02
100≤R<250	**0.250**	8.25E+01	0.00E+00	0.00E+00	0.00E+00	8.25E+01
250≤R<500	**0.040**	1.32E+01	0.00E+00	0.00E+00	0.00E+00	1.32E+01
500≤R<1000	**0.011**	3.63E+00	0.00E+00	0.00E+00	0.00E+00	3.63E+00
1000≤R<1500	**0.003**	9.90E-01	0.00E+00	0.00E+00	0.00E+00	9.90E-01
1500≤R<2000	**0.002**	6.60E-01	0.00E+00	0.00E+00	0.00E+00	6.60E-01
2000<R	**0.001**	3.30E-01	0.00E+00	0.00E+00	0.00E+00	3.30E-01

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
1,1,2,2-Tetrachloroethane	79345	5.80E-05	0	0
1,1,2-Trichloroethane	79005	1.60E-05	0	0
1,1-Dichloroethane	75343	1.60E-06	0	0
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	1.10E-02	0	0.13
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin	3268879	1.10E-02	0	0.13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	3.80E-01	0	0.004
1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin	35822469	3.80E-01	0	0.004
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	3.80E-01	0	0.004
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	3.80E+00	0	0.0004
1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin	39227286	3.80E+00	0	0.0004
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	3.80E+00	0	0.0004
1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin	57653857	3.80E+00	0	0.0004
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	3.80E+00	0	0.0004
1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin	19408743	3.80E+00	0	0.0004
1,2,3,7,8-Pentachlorodibenzofuran	57117416	1.10E+00	0	0.0013
1,2,3,7,8-Pentachlorodibenzo-P-dioxin	40321764	3.80E+01	0	0.00004
1,2-Dibromo-3-chloropropane	96128	2.00E-03	0	0
1,2-Epoxybutane	106887		0	20
1,3-Butadiene	106990	1.70E-04	660	2
1,3-Propane sultone	1120714	6.90E-04	0	0
1,4-Dioxane	123911	7.70E-06	3000	3000
1,6-Dinitropyrene	42397648	1.10E-02	0	0
1,8-Dinitropyrene	42397659	1.10E-03	0	0
1-Nitropyrene	5522430	1.10E-04	0	0
2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)	39635319	1.10E-03	0	1.3
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380084	1.10E-03	0	1.3
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782907	1.10E-03	0	1.3
2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}	32598144	1.10E-03	0	1.3
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663726	1.10E-03	0	1.3
2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)	74472370	1.10E-03	0	1.3
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508006	1.10E-03	0	1.3

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)	65510443	1.10E-03	0	1.3
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345	3.80E+00	0	0.0004
2,3,4,7,8-Pentachlorodibenzofuran	57117314	1.10E+01	0	0.00013
2,3,7,8-Tetrachlorodibenzofuran	51207319	3.80E+00	0	0.0004
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	1746016	3.80E+01	0	0.00004
2,4,6-Trichlorophenol	88062	2.00E-05	0	0
2,4-Diaminoanisole	615054	6.60E-06	0	0
2,4-Diaminotoluene	95807	1.10E-03	0	0
2,4-Dinitrotoluene	121142	8.90E-05	0	0
2-Aminoanthraquinone	117793	9.40E-06	0	0
2-Nitrofluorene	607578	1.10E-05	0	0
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774166	1.10E+00	0	0.0013
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465288	3.80E+00	0	0.0004
3,3',4,4'-TETRACHLORBIPHENYL (PCB77)	32598133	3.80E-03	0	0.4
3,3'-Dichlorobenzidine	91941	3.40E-04	0	0
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362504	1.10E-02	0	0.13
3-Methylcholanthrene	56495	6.30E-03	0	0
4,4'-Methylene bis(2 Chloroaniline) (MOCA)	101144	4.30E-04	0	0
4,4'-Methylenedianiline	101779	4.60E-04	0	20
4-Chloro-o-phenylenediamine	**95830**	**4.60E-06**	**0**	**0**
4-Dimethylaminoazobenzene	60117	1.30E-03	0	0
4-Nitropyrene	57835924	1.10E-04	0	0
5-Methylchrysene	3697243	1.10E-03	0	0
5-Nitroacenaphthene	602879	3.70E-05	0	0
6-Nitrochrysene	7496028	1.10E-02	0	0
7,12-Dimethylbenz[a]anthracene	57976	7.10E-02	0	0
7H-Dibenzo[c,g]carbazole	194592	1.10E-03	0	0
Acetaldehyde	75070	2.70E-06	470	140
Acetamide	60355	2.00E-05	0	0
Acrolein	107028		2.5	0.35
Acrylamide	79061	1.30E-03	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Acrylic acid	79107		6000	0
Acrylonitrile	107131	2.90E-04	0	5
Allyl chloride	107051	6.00E-06	0	0
alpha-Hexachlorocyclohexane	319846	1.10E-03	0	0
Ammonia	7664417		3200	200
Aniline	62533	1.60E-06	0	0
Arsenic	7440382	3.30E-03	0.2	0.015
Arsenic compounds (inorganic)	1016	3.30E-03	0.2	0.015
Arsine	7784421		0.2	0.015
Asbestos	1332214	1.90E-04	0	0
Barium chromate	10294403	1.50E-01	0	0.2
Benz[a]anthracene	56553	1.10E-04	0	0
Benzene	71432	2.90E-05	27	3
Benzidine (and its salts)	92875	1.40E-01	0	0
Benzidine-based dyes	1020	1.40E-01	0	0
Benzo[a]pyrene	50328	1.10E-03	0	0
Benzo[b]fluoranthene	205992	1.10E-04	0	0
Benzo[j]fluoranthene	205823	1.10E-04	0	0
Benzo[k]fluoranthene	207089	1.10E-04	0	0
Benzyl chloride	100447	4.90E-05	240	0
Beryllium	7440417	2.40E-03	0	0.007
beta-Hexachlorocyclohexane	319857	1.10E-03	0	0
Bis(2-chloroethyl) ether {DCEE}	**111444**	**7.10E-04**	**0**	**0**
Bis(chloromethyl) ether	542881	1.30E-02	0	0
Cadmium	7440439	4.20E-03	0	0.02
Calcium chromate	13765190	1.50E-01	0	0.2
Caprolactam	105602	0.00E+00	50	2.2
Carbon disulfide	75150		6200	800
Carbon monoxide	630080		23000	0
Carbon tetrachloride	56235	4.20E-05	1900	40
Chlorinated paraffin	108171262	2.50E-05	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Chlorine	7782505		210	0.2
Chlorine dioxide	10049044		0	0.6
Chlorobenzene	108907		0	1000
Chloroform	67663	5.30E-06	150	300
Chloropicrin	76062		29	0.4
Chromium trioxide	1333820	1.50E-01	0	0.002
Chromium, hexavalent	18540299	1.50E-01	0	0.2
Chrysene	218019	1.10E-05	0	0
Copper	7440508		100	0
Cresols (mixtures of) {Cresylic acid}	1319773		0	600
Cupferron	135206	6.30E-05	0	0
Cyanide compounds	1073		340	9
CYANIDE COMPOUNDS [Inorganic)	57125		340	9
Di(2-ethylhexyl) phthalate	117817	2.40E-06	0	0
Dibenz[a,h]acridine	226368	1.10E-04	0	0
Dibenz[a,h]anthracene	53703	1.20E-03	0	0
Dibenz[a,j]acridine	224420	1.10E-04	0	0
Dibenzo[a,e]pyrene	192645	1.10E-03	0	0
Dibenzo[a,h]pyrene	189640	1.10E-02	0	0
Dibenzo[a,i]pyrene	189559	1.10E-02	0	0
Dibenzo[a,l]pyrene	191300	1.10E-02	0	0
Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]	1080	3.80E+01		0.00004
Dichlorodifluoromethene Freon 12	75718	0.00E+00	0	0
Diesel engine exhaust, particulate matter (Diesel PM)	9901	3.00E-04	0	5
Diethanolamine	111422		0	3
Dimethyl formamide	68122		0	80
Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA	1086	3.80E+01	0	0.00004
Direct Black 38	1937377	1.40E-01	0	0
Direct Blue 6	2602462	1.40E-01	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Direct Brown 95 (technical grade)	16071866	1.40E-01	0	0
Epichlorohydrin	106898	2.30E-05	1300	3
Ethyl benzene	100414	2.50E-06	0	2000
Ethyl chloride {Chlorethane)	75003		0	30000
Ethylene dibromide {EDB}	106934	7.10E-05	0	0.8
Ethylene dichloride {EDC}	107062	2.10E-05	0	400
Ethylene glycol	107211		0	400
Ethylene glycol monobutyl ether	111762		14000	0
Ethylene glycol monoethyl ether	110805		370	70
Ethylene glycol monoethyl ether acetate	111159		140	300
Ethylene glycol monomethyl ether	109864		93	60
Ethylene glycol monomethyl ether acetate	110496		0	90
Ethylene oxide	75218	8.80E-05	0	30
Ethylene thiourea	96457	1.30E-05	0	0
Fluorides	1101		240	13
Formaldehyde	50000	6.00E-06	55	9
Glutaraldehyde	111308		0	0.08
Hexachlorobenzene	118741	5.10E-04	0	0
Hexachlorocyclohexanes (mixed or technical grade)	608731	1.10E-03	0	0
Hexane	110543		0	7000
Hydrazine	302012	4.90E-03	0	0.2
Hydrochloric acid	7647010		2100	9
Hydrocyanic acid	74908		340	9
Hydrogen fluoride	7664393		240	14
Hydrogen Selenide	7783075		5	0
Hydrogen sulfide	7783064		42	10
Indeno[1,2,3-cd]pyrene	193395	1.10E-04	0	0
Isophorone	78591		0	2000
Isopropyl alcohol	67630		3200	7000
Lead	7439921	1.20E-05	0	0
Lead acetate	301042	1.20E-05	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Lead chromate	7758976	1.50E-01	0	0.2
Lead compounds (inorganic)	1128	1.20E-05	0	0
Lead phosphate	7446277	1.20E-05	0	0
Lead subacetate	1335326	1.20E-05	0	0
Lindane {gamma-Hexachlorocyclohexane}	58899	3.10E-04	0	0
Maleic anhydride	108316		0	0.7
Manganese	7439965		0	0.09
m-Cresol	108394		0	600
Mercuric chloride	7487947		0.6	0.03
Mercury	7439976		0.6	0.03
Methanol	67561		28000	4000
Methyl bromide {Bromomethane}	74839		3900	5
Methyl chloroform {1,1,1-Trichloroethane}	71556		68000	1000
Methyl ethyl ketone	78933		13000	0
Methyl isocyanate	624839		0	1
Methyl tert-butyl ether	1634044	2.60E-07	0	8000
Methylene chloride {Dichloromethane}	75092	1.00E-06	14000	400
Methylene diphenyl diisocyanate {MDI}	101688		12	0.08
Michler's ketone	90948	2.50E-04	0	0
m-Xylene	108383		22000	700
Naphthalene	91203	3.40E-05	0	9
Nickel	7440020	2.60E-04	0.2	0.014
Nickel acetate	373024	2.60E-04	0.2	0.014
Nickel carbonate	3333673	2.60E-04	0.2	0.014
Nickel carbonyl	13463393	2.60E-04	0.2	0.014
Nickel hydroxide	12054487	2.60E-04	0.2	0.014
Nickel oxide	1313991	2.60E-04	0.2	0.02
Nickel refinery dust	1146	2.60E-04	0.2	0.014
Nickel subsulfide	12035722	2.60E-04	0.2	0.014
Nickelocene	1271289	2.60E-04	0.2	0.014
Nitric acid	7697372		86	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
NITROGEN DIOXIDE	10102440		470	0
N-Nitrosodiethylamine	55185	1.00E-02	0	0
N-Nitrosodimethylamine	62759	4.60E-03	0	0
N-Nitrosodi-n-butylamine	924163	3.10E-03	0	0
N-Nitrosodi-n-propylamine	621647	2.00E-03	0	0
N-Nitrosodiphenylamine	86306	2.60E-06	0	0
N-Nitrosomethylethylamine	10595956	6.30E-03	0	0
N-Nitrosomorpholine	59892	1.90E-03	0	0
N-Nitrosopiperidine	100754	2.70E-03	0	0
N-Nitrosopyrrolidine	930552	6.00E-04	0	0
o-Cresol	95487		0	600
OLEUM	8014957		120	0
o-Xylene	95476		22000	700
Ozone	10028156		180	0
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	1151	1.10E-03	0	0
PCBs {Polychlorinated biphenyls}	1336363	5.70E-04	0	0
p-Chloro-o-toluidine	95692	7.70E-05	0	0
p-Cresidine	120718	4.30E-05	0	0
p-Cresol	106445		0	600
p-Dichlorobenzene	106467	1.10E-05	0	800
Pentachlorophenol	87865	5.10E-06	0	0
Perchloroethylene {Tetrachloroethene}	127184	6.10E-06	20000	35
Phenol	108952		5800	200
Phosgene	75445		4	0
Phosphine	7803512		0	0.8
Phosphoric acid	7664382		0	7
Phthalic anhydride	85449		0	20
p-Nitrosodiphenylamine	156105	6.30E-06	0	0
Potassium bromate	7758012	1.40E-04	0	0
Propylene	115071		0	3000

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Propylene glycol monomethyl ether	107982		0	7000
Propylene oxide	75569	3.70E-06	3100	30
p-Xylene	106423		22000	700
Selenium	7782492		0	20
Selenium sulfide	7446346		0	20
Silica, crystalline	1175		0	3
Silica, crystalline	7631869		0	3
Sodium dichromate	10588019	1.50E-01	0	0.2
Sodium hydroxide	1310732		8	0
Strontium chromate	7789062	1.50E-01	0	0.2
Styrene	100425		21000	900
Sulfates	9960		120	0
Sulfur Dioxide	7446095		660	0
Sulfur Trioxide	7446719		120	1
Sulfuric acid	7664939		120	1
t-Butyl acetate	540885	1.30E-06		
Thioacetamide	62555	1.70E-03	0	0
Toluene	108883		37000	300
TOLUENE DIISOCYANATE	26471625	1.10E-05	2	0.008
Toluene-2,4-diisocyanate	584849	1.10E-05	2	0.008
Toluene-2,6-diisocyanate	91087	1.10E-05	2	0.008
Trichloroethylene	79016	2.00E-06	0	600
Triethylamine	121448		2800	200
Urethane	51796	2.90E-04	0	0
Vanadium (fume or dust)	7440622		30	0
VANADIUM PENTOXIDE	1314621		30	0
Vinyl acetate	108054		0	200
Vinyl chloride	75014	7.80E-05	180000	0
Vinylidene chloride	75354		0	70
XYLENES (mixed xylenes)	1330207		22000	700

EXHIBIT 1

CAS	Substance
1000	Aflatoxins
1005	Analgesic mixtures containing phenacetin
1010	Androgenic (anabolic) steroids
1016	Arsenic compounds (inorganic)
1017	Arsenic compounds (other than inorganic)
1020	Benzidine-based dyes
1025	Betel quid with tobacco
1030	Bitumens, extracts of steam-refined and air-refined bitumens
1035	Bleomycins
1050	Carbon black extract
1055	Carrageenan (degraded)
1056	Ceramic fibers (man-made)
1058	Chlorobenzenes
1059	p-Chloro-o-toluidine
1060	Chlorophenols
1065	Chlorophenoxy herbicides
1068	Conjugated estrogens
1070	Creosotes
1073	Cyanide compounds
1075	Dialkylnitrosamines
1078	Diaminotoluenes (mixed isomers)
1080	Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]
1085	Dioxins, total, with individ. isomers also reported {PCDDs}
1086	Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA
1090	Environmental Tobacco Smoke
1091	Epoxy resins
1095	Estrogens, non-steroidal
1100	Estrogens, steroidal
1101	Fluorides
1103	Fluorocarbons (brominated)
1104	Fluorocarbons (chlorinated)
1110	Gasoline vapors
1111	Glasswool (man-made fibers)
1115	Glycol ethers (and their acetates)
1125	Isocyanates
1128	Lead compounds (inorganic)
1129	Lead compounds (other than inorganic)
1131	Lubricant base oils
1135	Mineral fibers (other than man-made)
1136	Mineral fibers (fine: man-made)
1140	Mineral oils (untreated and mildly treated oils)
1146	Nickel refinery dust
1148	Nitrilotriacetic acid (salts)
1150	PAHs, total, with individ. components also reported
1151	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]
1155	Polybrominated biphenyls
1160	Progestins
1165	Radionuclides
1166	Radon and its decay
1167	Retinol/retinyl este
1168	Rockwool (man-made fibers)
1175	Silica, crystalline
1180	Shale oils
1181	Slagwool (man-made fibers)
1185	Soots
1190	Talc containing asbestiform fibers

Substance	CAS
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea {Methyl CCNU}	13909096
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU}	13010474
1,1,1,2-Tetrafluoroethane {HFC-134a}	811972
1,1,2,2-Tetrachloroethane	79345
1,1,2-Trichloroethane	79005
1,1-Dichloroethane	75343
1,1-Difluoroethane {Freon 152a}	75376
1,1-Dimethylhydrazine	57147
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin	3268879
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394
1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin	35822469
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269
1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin	39227286
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449
1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin	57653857
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219
1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin	19408743
1,2,3,7,8-Pentachlorodibenzofuran	57117416
1,2,3,7,8-Pentachlorodibenzo-P-dioxin	40321764
1,2,3-Trichloropropane	96184
1,2,4-Trichlorobenze	120821
1,2,4-Trimethylbenze	95636
1,2-Dibromo-3-chloropropane	96128
1,2-Dichlorobenzene	95501
1,2-Dichloroethylene	540590
1,2-Diethylhydrazine	1615801
1,2-Dimethylhydrazine	540738
1,2-Epoxybutane	106887
1,3-Butadiene	106990
1,3-Dichlorobenzene	541731
1,3-Propane sultone	1120714
1,4-Butanediol dimethanesulfonate	55981
1,4-Dichloro-2-butene	764410
1,4-Dioxane	123911
1,6-Dinitropyrene	42397648
1,8-Dinitropyrene	42397659
1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone	555840
1-Amino-2-methylanthraquinone	82280
1-Naphthylamine	134327
1-Nitropyrene	5522430
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	3570750
2,2,4-Trimethylpentane	540841
2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)	39635319
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380084
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782907
2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}	32598144
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663726
2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)	74472370
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508006
2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)	65510443
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345
2,3,4,6-Tetrachlorophenol	58902
2,3,4,7,8-Pentachlorodibenzofuran	57117314
2,3,7,8-Tetrachlorodibenzofuran	51207319

CAS	Substance
1200	Tobacco products, smokeless
1205	alpha-chlorinated Toluenes
1206	Wood preservatives (containing arsenic and chromate)
2222	Polybrominated diphenyl ethers {PBDEs}
9901	Diesel engine exhaust, particulate matter (Diesel PM)
9902	Diesel engine exhaust, total organic gas
9910	Gasoline engine exhaust, particulate matter
9911	Gasoline engine exhaust, total organic gas
9960	Sulfates
9960	SULFATES
9961	SULFURIC ACID+OLEUM
11101	Particulate Matter
16113	Reactive Organic Gas
42101	Carbon Monoxide [Criteria Pollutant]
42401	Oxides of sulfur
42603	Oxides of Nitrogen
43101	Total Organic Gases
43104	Volatile Organic Compounds (VOC)
50000	Formaldehyde
50066	Phenobarbital
50077	Mitomycin C
50180	Cyclophosphamide
50282	Estradiol 17 beta
50293	DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane}
50328	Benzo[a]pyrene
50351	Thalidomide
50419	Clomiphene citrate
50760	Actinomycin D
50782	Aspirin
51218	Fluorouracil
51285	2,4-Dinitrophenol
51525	Propylthiouracil
51752	Nitrogen mustard
51796	Urethane
52244	Tris(1-aziridinyl) phosphine sulfide
52675	Penicillamine
52686	Trichlorfon
53167	Estrone
53703	Dibenz[a,h]anthracene
54115	Nicotine
54626	Aminopterin
54911	Pipobroman
55185	N-Nitrosodiethylamine
55210	Benzamide
55630	Nitroglycerin
55867	Nitrogen mustard hydrochloride
55981	1,4-Butanediol dimethanesulfonate
56042	Methylthiouracil
56235	Carbon tetrachloride
56382	Parathion
56495	3-Methylcholanthrene
56531	Diethylstilbestrol
56553	Benz[a]anthracene
56757	Chloramphenicol
57125	CYANIDE COMPOUNDS [Inorganic)
57147	1,1-Dimethylhydrazine

Substance	CAS
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	1746016
2,3-Dibromo-1-propanol	96139
2,3-Dichloropropene	78886
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
2,4-Diaminoanisole	615054
2,4-Diaminoanisole sulfate	39156417
2,4-Diaminotoluene	95807
2,4-Dichlorophenol	120832
2,4-Dimethylphenol {2,4-Xylenol}	105679
2,4-Dinitrophenol	51285
2,4-Dinitrotoluene	121142
2,6-Dinitrotoluene	606202
2,6-Xylidene	87627
2-Amino-3-methyl-9H-pyrido(2,3-b) indole {MeA-alpha-C}	68006837
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	712685
2-Aminoanthraquinone	117793
2-Chloroacetophenone	532274
2-CHLOROPHENOL	95578
2-Methyl naphthalene	91576
2-Methyl-1-nitroanthraquinone (uncertain purity)	129157
2-Methylaziridine	75558
2-Methyllactonitrile	75865
2-Methylpyridine	109068
2-Naphthylamine	91598
2-Nitrofluorene	607578
2-Nitrophenol	88755
2-Nitropropane	79469
2-Phenylphenol	90437
3-(N-Nitrosomethylamino)propionitrile	60153493
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774166
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465288
3,3',4,4'-TETRACHLORBIPHENYL (PCB77)	32598133
3,3'-Dichloro-4,4'-diaminodiphenyl ether	28434868
3,3'-Dichlorobenzidine	91941
3,3'-Dimethoxybenzidine	119904
3,3'-Dimethoxybenzidine dihydrochloride	20325400
3,3'-Dimethylbenzidine {o-Tolidine}	119937
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362504
3-Amino-9-ethylcarbazole hydrochloride	6109973
3-Chloro-2-methylpropene	563473
3-Methylcholanthrene	56495
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone {NNK}	64091914
4,4'-Diaminodiphenyl ether	101804
4,4'-Isopropylidenediphenol	80057
4,4'-Methylene bis (N,N-dimethyl) benzenamine	101611
4,4'-Methylene bis(2 Chloroaniline) (MOCA)	101144
4,4'-Methylene bis(2-methylaniline)	838880
4,4'-Methylenedianiline	101779
4,4'-Thiodianiline	139651
4,6-Dinitro-o-cresol	534521
4-Chloro-o-phenylenediamine	95830
4-Dimethylaminoazobenzene	60117
4-Nitrobiphenyl	92933
4-Nitrophenol	100027
4-Nitropyrene	57835924

CAS	Substance
57330	Pentobarbital sodium
57410	Phenytoin
57636	Ethinyl estradiol
57830	Progesterone
57976	7,12-Dimethylbenz[a]anthracene
58184	Methyltestosterone
58220	Testosterone and its esters
58899	Lindane {gamma-Hexachlorocyclohexane}
58902	2,3,4,6-Tetrachlorophenol
59052	Methotrexate
59870	Nitrofurazone
59892	N-Nitrosomorpholine
59961	Phenoxybenzamine
60093	p-Aminoazobenzene
60117	4-Dimethylaminoazobenzene
60344	Methyl hydrazine
60355	Acetamide
60560	Methimazole
60571	Dieldrin
61574	Niridazole
62442	Phenacetin
62500	Ethyl methanesulfonate
62533	Aniline
62555	Thioacetamide
62759	N-Nitrosodimethylamine
63252	Carbaryl
63923	Phenoxybenzimide hydrochloride
63989	Phenacemide
64675	Diethyl sulfate
64755	Tetracycline hydrochoride
66273	Methyl methanesulfon
66751	Uracil mustard
66819	Cycloheximide
67209	Nitrofurantoin
67458	Furazolidone
67561	Methanol
67630	Isopropyl alcohol
67663	Chloroform
68122	Dimethyl formamide
68224	Norethisterone
68768	Tris(aziridinyl)-p-benzoquinone
70257	N-Methyl-N'-nitro-N-nitrosoguanidine
71363	n-Butyl alcohol
71432	Benzene
71556	Methyl chloroform {1,1,1-Trichloroethane}
71589	Medroxyprogesterone
72333	Mestranol
72435	Methoxychlor
72548	Dichlorodiphenyldichloroethane {DDD}
72571	Trypan blue
74828	Methane
74839	Methyl bromide {Bromomethane}
74851	Ethylene
74873	Methyl chloride {Chloromethane}
74884	Methyl iodide {Iodomethane}
74908	Hydrocyanic acid

Substance	CAS
4-Vinyl-1-cyclohexene diepoxide	106876
4-Vinylcyclohexene	100403
5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone	139913
5-Methoxypsoralen	484208
5-Methylchrysene	3697243
5-Nitroacenaphthene	602879
5-Nitro-o-anisidine	99592
6-Nitrochrysene	7496028
7,12-Dimethylbenz[a]anthracene	57976
7H-Dibenzo[c,g]carbazole	194592
A-alpha-C {2-Amino-9H-pyrido[2,3-b]indole}	26148685
Acenaphthene	83329
Acenaphthylene	208968
Acetaldehyde	75070
Acetamide	60355
Acetochlor	34256821
Acetohydroxamic acid	546883
Acetonitrile	75058
Acetophenone	98862
Acifluorfen	62476599
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Actinomycin D	50760
Adriamycin	23214928
AF-2	3688537
Aflatoxins	1000
Alachlor	15972608
Aldrin	309002
all-trans-Retinoic acid	302794
Allyl alcohol	107186
Allyl chloride	107051
alpha-chlorinated Toluenes	1205
alpha-Hexachlorocyclohexane	319846
Alprazolam	28981977
Aluminum	7429905
Aluminum oxide (fibrous)	1344281
Amikacin sulfate	39831555
Aminoglutethimide	125848
Aminopterin	54626
Ammonia	7664417
Ammonium nitrate	6484522
Ammonium sulfate	7783202
Analgesic mixtures containing phenacetin	1005
Androgenic (anabolic) steroids	1010
Aniline	62533
Anthracene	120127
Antimony	7440360
Antimony trioxide	1309644
Aramite	140578
Arsenic	7440382
Arsenic compounds (inorganic)	1016
Arsenic compounds (other than inorganic)	1017
Arsine	7784421
Asbestos	1332214

CAS	Substance
74953	Methylene bromide
75003	Ethyl chloride {Chlorethane)
75014	Vinyl chloride
75025	Vinyl fluoride
75058	Acetonitrile
75070	Acetaldehyde
75092	Methylene chloride {Dichloromethane}
75150	Carbon disulfide
75218	Ethylene oxide
75252	Bromoform
75274	Bromodichloromethane
75343	1,1-Dichloroethane
75354	Vinylidene chloride
75376	1,1-Difluoroethane {Freon 152a}
75434	Dichlorofluoromethane {Freon 21}
75445	Phosgene
75456	Chlorodifluoromethane {Freon 22}
75467	Trifluoromethane {Freon 23}
75558	2-Methylaziridine
75569	Propylene oxide
75650	tert-Butyl alcohol
75694	Trichlorofluoromethane {Freon 11}
75718	Dichlorodifluoromethene (Freon 12)
75730	Carbon tetrafluoride
75865	2-Methyllactonitrile
76062	Chloropicrin
76131	Chlorinated Fluorocarbon {CFC-113} {1,1,2-Trichloro-1,2,2-trifluoroethane}
76437	Fluoxymesterone
77474	Hexachlorocyclopentadiene
77781	Dimethyl sulfate
78308	Triorthocresyl phosphate
78400	Triethyl phosphine
78591	Isophorone
78795	Isoprene, except from vegetative emission sources
78842	Isobutyraldehyde
78886	2,3-Dichloropropene
78922	sec-Butyl alcohol
78933	MEK
78933	Methyl ethyl ketone
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
79061	Acrylamide
79107	Acrylic acid
79118	Chloroacetic acid
79210	Peracetic acid
79345	1,1,2,2-Tetrachloroethane
79469	2-Nitropropane
79572	Oxytetracycline
80057	4,4'-Isopropylidenediphenol
80159	Cumene hydroperoxide
80626	Methyl methacrylate
81072	Saccharin
81812	Warfarin
81889	D and C Red No. 19
82280	1-Amino-2-methylanthraquinone
82688	Pentachloronitrobenzene {Quintobenzene}

Substance	CAS
Aspirin	50782
Auramine	492808
Azaserine	115026
Azathioprine	446866
Azobenzene	103333
Barium	7440393
Barium chromate	10294403
Benz[a]anthracene	56553
Benzal chloride	98873
Benzamide	55210
Benzene	71432
Benzidine (and its salts)	92875
Benzidine-based dyes	1020
Benzo[a]pyrene	50328
Benzo[b]fluoranthene	205992
Benzo[e]pyrene	192972
Benzo[g,h,i]perylene	191242
Benzo[j]fluoranthene	205823
Benzo[k]fluoranthene	207089
Benzofuran	271896
Benzoic trichloride	98077
Benzoyl chloride	98884
Benzoyl peroxide	94360
Benzphetamine hydrochloride	5411223
Benzyl chloride	100447
Benzyl violet 4B	1694093
Beryllium	7440417
beta-Butyrolactone	3068880
beta-Hexachlorocyclohexane	319857
Betel quid with tobacco	1025
Biphenyl	92524
Bis(2-chloro-1-methylethyl) ether	108601
Bis(2-chloroethyl) ether {DCEE}	111444
Bis(2-ethylhexyl) adipate	103231
Bis(chloromethyl) ether	542881
Bischloroethyl nitrosourea	154938
Bitumens, extracts of steam-refined and air-refined bitumens	1030
Bleomycins	1035
Bromine	7726956
Bromine Pentafluoride	7789302
Bromodichloromethane	75274
Bromoform	75252
Bromoxynil	1689845
Butyl acrylate	141322
Butyl benzyl phthalate	85687
Butylated hydroxyanisole {BHA}	25013165
Butyraldehyde	123728
C. I. Acid Green 3	4680788
C. I. Basic Green 4	569642
C. I. Basic Red 1	989388
C. I. Basic Red 9 monohydrochloride	569619
C. I. Disperse Yellow 3	2832408
Cadmium	7440439
Calcium chromate	13765190
Calcium cyanamide	156627
Caprolactam	105602

CAS	Substance
83329	Acenaphthene
84173	Dienestrol
84662	Diethyl phthalate
84742	Dibutyl phthalate
85018	Phenanthrene
85101	Particulate Matter 1
85449	Phthalic anhydride
85687	Butyl benzyl phthalate
86306	N-Nitrosodiphenylamine
86737	Fluorene
87296	Cinnamyl anthranilate
87627	2,6-Xylidene
87683	Hexachlorobutadiene
87865	Pentachlorophenol
88062	2,4,6-Trichlorophenol
88101	Particulate Matter 2.5 Microns or less
88755	2-Nitrophenol
88857	Dinoseb
88891	Picric acid
90437	2-Phenylphenol
90948	Michler's ketone
91087	Toluene-2,6-diisocyanate
91203	Naphthalene
91225	Quinoline
91576	2-Methyl naphthalene
91598	2-Naphthylamine
91941	3,3'-Dichlorobenzidine
92524	Biphenyl
92875	Benzidine (and its salts)
92933	4-Nitrobiphenyl
94360	Benzoyl peroxide
94586	Dihydrosafrole
94597	Safrole
94757	Dichlorophenoxyacetic acid, salts and esters {2,4-D}
94780	Phenazopyridine hydrochloride
95067	Sulfallate
95476	o-Xylene
95487	o-Cresol
95501	1,2-Dichlorobenzene
95578	2-CHLOROPHENOL
95636	1,2,4-Trimethylbenze
95692	p-Chloro-o-toluidine
95807	2,4-Diaminotoluene
95830	4-Chloro-o-phenylenediamine
95954	2,4,5-Trichlorophenol
96093	Styrene oxide
96128	1,2-Dibromo-3-chloropropane
96139	2,3-Dibromo-1-propanol
96184	1,2,3-Trichloropropane
96333	Methyl acrylate
96457	Ethylene thiourea
97563	o-Aminoazotoluene
98077	Benzoic trichloride
98828	Cumene
98862	Acetophenone
98873	Benzal chloride

Substance	CAS
Carbaryl	63252
Carbon black extract	1050
Carbon disulfide	75150
Carbon monoxide	630080
Carbon Monoxide [Criteria Pollutant]	42101
Carbon tetrachloride	56235
Carbon tetrafluoride	75730
Carbonyl sulfide	463581
Carboplatin	41575944
Carrageenan (degraded)	1055
Catechol	120809
Ceramic fibers (man-made)	1056
Chenodiol	474259
Chloramben	133904
Chlorambucil	305033
Chloramphenicol	56757
Chlorcyclizine hydrochloride	1620219
Chlordecone {Kepone}	143500
Chlordimeform	6164983
Chlorendic acid	115286
Chlorinated Fluorocarbon {CFC-113} {1,1,2-Trichloro-1,2,2-trifluoroethane}	76131
Chlorinated paraffin	1.08E+08
Chlorine	7782505
Chlorine dioxide	10049044
Chloroacetic acid	79118
Chlorobenzene	108907
Chlorobenzenes	1058
Chlorodibromomethane	124481
Chlorodifluoromethane {Freon 22}	75456
Chloroform	67663
Chlorophenols	1060
Chlorophenoxy herbicides	1065
Chloropicrin	76062
Chloroprene	126998
Chlorothalonil	1897456
Chromium	7440473
Chromium trioxide	1333820
Chromium, hexavalent	18540299
Chrysene	218019
Cinnamyl anthranilate	87296
Cisplatin	15663271
Citrus Red No. 2	6358538
Clomiphene citrate	50419
Coal tars	8007452
Cobalt	7440484
Conjugated estrogens	1068
Copper	7440508
Creosotes	1070
Cresols (mixtures of) {Cresylic acid}	1319773
Crotonaldehyde	4170303
Cumene	98828
Cumene hydroperoxide	80159
Cupferron	135206
Cyanazine	21725462
Cyanide compounds	1073
CYANIDE COMPOUNDS [Inorganic]	57125

CAS	Substance
98884	Benzoyl chloride
98953	Nitrobenzene
99592	5-Nitro-o-anisidine
99650	m-Dinitrobenzene
99661	Valproate
100027	4-Nitrophenol
100210	Terephthalic acid
100254	p-Dinitrobenzene
100403	4-Vinylcyclohexene
100414	Ethyl benzene
100425	Styrene
100447	Benzyl chloride
100754	N-Nitrosopiperidine
101020	Triphenyl phosphite
101144	4,4'-Methylene bis(2 Chloroaniline) (MOCA)
101611	4,4'-Methylene bis (N,N-dimethyl) benzenamine
101688	Methylene diphenyl diisocyanate {MDI}
101779	4,4'-Methylenedianiline
101804	4,4'-Diaminodiphenyl ether
101906	Diglycidyl resorcinol ether {DGRE}
103231	Bis(2-ethylhexyl) adipate
103333	Azobenzene
104949	p-Anisidine
105602	Caprolactam
105679	2,4-Dimethylphenol {2,4-Xylenol}
106423	p-Xylene
106445	p-Cresol
106467	p-Dichlorobenzene
106478	p-Chloroaniline
106490	p-Toluidine
106503	p-Phenylenediamine
106514	Quinone
106876	4-Vinyl-1-cyclohexene diepoxide
106887	1,2-Epoxybutane
106898	Epichlorohydrin
106934	Ethylene dibromide {EDB}
106990	1,3-Butadiene
107028	Acrolein
107051	Allyl chloride
107062	Ethylene dichloride {EDC}
107131	Acrylonitrile
107186	Allyl alcohol
107211	Ethylene glycol
107982	PGME
107982	Propylene glycol monomethyl ether
108054	Vinyl acetate
108101	Methyl isobutyl ketone {Hexone}
108101	MIK
108316	Maleic anhydride
108383	m-Xylene
108394	m-Cresol
108601	Bis(2-chloro-1-methylethyl) ether
108656	PGME Acetate
108656	Propylene glycol monomethyl ether acetate
108883	Toluene
108907	Chlorobenzene

Substance	CAS
Cycasin	14901087
Cyclohexane	110827
Cyclohexanol	108930
Cycloheximide	66819
Cyclophosphamide	50180
Cyhexatin	13121705
Cytarabine	147944
D and C Orange No. 1	3468631
D and C Red No. 19	81889
D and C Red No. 8	2092560
D and C Red No. 9	5160021
Dacarbazine	4342034
Daminozide	1596845
Danazol	17230885
Daunomycin	20830813
Daunorubicin hydrochloride	23541506
DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane}	50293
Decabromodiphenyl oxide	1163195
Di(2-ethylhexyl) phthalate	117817
Dialkylnitrosamines	1075
Diallate	2303164
Diaminotoluenes (mixed isomers)	1078
Diazomethane	334883
Dibenz[a,h]acridine	226368
Dibenz[a,h]anthracene	53703
Dibenz[a,j]acridine	224420
Dibenzo[a,e]pyrene	192654
Dibenzo[a,h]pyrene	189640
Dibenzo[a,i]pyrene	189559
Dibenzo[a,l]pyrene	191300
Dibenzofuran	132649
Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]	1080
Dibutyl phthalate	84742
Dichlorobenzenes (mixed isomers)	25321226
Dichlorodifluoromethene (Freon 12)	75718
Dichlorodiphenyldichloroethane {DDD}	72548
Dichlorofluoromethane {Freon 21}	75434
Dichlorophenoxyacetic acid, salts and esters {2,4-D}	94757
Dicofol	115322
Dieldrin	60571
Dienestrol	84173
Diepoxybutane	1464535
Diesel engine exhaust, particulate matter (Diesel PM)	9901
Diesel engine exhaust, total organic gas	9902
Diethanolamine	111422
Diethyl phthalate	84662
Diethyl sulfate	64675
Diethylene glycol	111466
Diethylene glycol dimethyl ether	111966
Diethylene glycol monobutyl ether	112345
Diethylene glycol monoethyl ether	111900
Diethylene glycol monomethyl ether	111773
Diethylstilbestrol	56531
Diglycidyl resorcinol ether {DGRE}	101906
Dihydrosafrole	94586
Dimethyl formamide	68122

CAS	Substance
108930	Cyclohexanol
108952	Phenol
109068	2-Methylpyridine
109864	Ethylene glycol monomethyl ether
110009	Furan
110496	Ethylene glycol monomethyl ether acetate
110543	Hexane
110714	Ethylene glycol dimethyl ether
110805	Ethylene glycol monoethyl ether
110827	Cyclohexane
110861	Pyridine
111159	Ethylene glycol monoethyl ether acetate
111308	Glutaraldehyde
111422	Diethanolamine
111444	Bis(2-chloroethyl) ether {DCEE}
111466	Diethylene glycol
111762	EGBE
111762	Ethylene glycol monobutyl ether
111773	Diethylene glycol monomethyl ether
111900	Diethylene glycol monoethyl ether
111966	Diethylene glycol dimethyl ether
112345	Diethylene glycol monobutyl ether
112492	Triethylene glycol dimethyl ether
114261	Propoxur
115026	Azaserine
115071	Propylene
115286	Chlorendic acid
115322	Dicofol
115673	Paramethadione
115866	Triphenyl phosphate
117793	2-Aminoanthraquinone
117817	Di(2-ethylhexyl) phthalate
117840	n-Dioctyl phthalate
118741	Hexachlorobenzene
119904	3,3'-Dimethoxybenzidine
119937	3,3'-Dimethylbenzidine {o-Tolidine}
120127	Anthracene
120581	Isosafrole
120718	p-Cresidine
120809	Catechol
120821	1,2,4-Trichlorobenze
120832	2,4-Dichlorophenol
121142	2,4-Dinitrotoluene
121448	Triethylamine
121697	N,N-Dimethylaniline
122601	Phenyl glycidyl ether
123319	Hydroquinone
123386	Propionaldehyde
123728	Butyraldehyde
123911	1,4-Dioxane
124403	Dimethylamine
124481	Chlorodibromomethane
125848	Aminoglutethimide
126078	Griseofulvin
126727	Tris(2,3-dibromopropyl)phosphate
126738	Tributyl phosphate

Substance	CAS
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dimethylamine	124403
Dimethylvinylchloride {DMVC}	513371
Dinitrobenzenes (mixitures of)	25154545
Dinitrotoluenes (mixed isomers)	25321146
Dinocap	39300453
Dinoseb	88857
Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA	1086
Dioxins, total, with individ. isomers also reported {PCDDs}	1085
Diphenylhydantoin	630933
Dipropylene glycol	25265718
Dipropylene glycol monomethyl ether	34590948
Direct Black 38	1937377
Direct Blue 6	2602462
Direct Brown 95 (technical grade)	16071866
Disperse Blue 1	2475458
Doxycycline	564250
EGBE	111762
Environmental Tobacco Smoke	1090
Epichlorohydrin	106898
Epoxy resins	1091
Ergotamine tartrate	379793
Erionite	12510428
Estradiol 17 beta	50282
Estrogens, non-steroidal	1095
Estrogens, steroidal	1100
Estrone	53167
Ethinyl estradiol	57636
Ethyl acrylate	140885
Ethyl benzene	100414
Ethyl chloride {Chlorethane)	75003
Ethyl chloroformate	541413
Ethyl methanesulfonate	62500
Ethylene	74851
Ethylene dibromide {EDB}	106934
Ethylene dichloride {EDC}	107062
Ethylene glycol	107211
Ethylene glycol diethyl ether	629141
Ethylene glycol dimethyl ether	110714
Ethylene glycol monobutyl ether	111762
Ethylene glycol monoethyl ether	110805
Ethylene glycol monoethyl ether acetate	111159
Ethylene glycol monomethyl ether	109864
Ethylene glycol monomethyl ether acetate	110496
Ethylene glycol monopropyl ether	2807309
Ethylene oxide	75218
Ethylene thiourea	96457
Etoposide	33419420
Etretinate	54350480
Fluometuron	2164172
Fluoranthene	206440
Fluorene	86737
Fluorides	1101
Fluorocarbons (brominated)	1103
Fluorocarbons (chlorinated)	1104

EXHIBIT 1

CAS	Substance
126998	Chloroprene
127184	Perchloroethylene {Tetrachloroethene}
127480	Trimethadione
128449	Sodium saccharin
129000	Pyrene
129157	2-Methyl-1-nitroanthraquinone (uncertain purity)
131113	Dimethyl phthalate
132274	Sodium o-phenylphenate
132649	Dibenzofuran
133073	Folpet
133904	Chloramben
134292	o-Anisidine hydrochloride
134327	1-Naphthylamine
135206	Cupferron
139651	4,4'-Thiodianiline
139913	5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone
140578	Aramite
140885	Ethyl acrylate
141322	Butyl acrylate
143500	Chlordecone {Kepone}
143679	Vinblastine sulfate
147944	Cytarabine
148823	Melphalan
154427	Thioguanine
154938	Bischloroethyl nitrosourea
156105	p-Nitrosodiphenylamine
156627	Calcium cyanamide
189559	Dibenzo[a,i]pyrene
189640	Dibenzo[a,h]pyrene
191242	Benzo[g,h,i]perylene
191300	Dibenzo[a,l]pyrene
192654	Dibenzo[a,e]pyrene
192972	Benzo[e]pyrene
193395	Indeno[1,2,3-cd]pyrene
194592	7H-Dibenzo[c,g]carbazole
198550	Perylene
205823	Benzo[j]fluoranthene
205992	Benzo[b]fluoranthene
206440	Fluoranthene
207089	Benzo[k]fluoranthene
208968	Acenaphthylene
218019	Chrysene
224420	Dibenz[a,j]acridine
226368	Dibenz[a,h]acridine
271896	Benzofuran
299752	Treosulfan
301042	Lead acetate
302012	Hydrazine
302705	Nitrogen mustard N-oxide
302794	all-trans-Retinoic acid
303344	Lasiocarpine
303479	Ochratoxin A
305033	Chlorambucil
309002	Aldrin
315220	Monocrotaline
315377	Testosterone enanthate

Substance	CAS
Fluorouracil	51218
Fluoxymesterone	76437
Flutamide	13311847
Folpet	133073
Formaldehyde	50000
Furan	110009
Furazolidone	67458
Furmecyclox	60568050
Gasoline engine exhaust, particulate matter	9910
Gasoline engine exhaust, total organic gas	9911
Gasoline vapors	1110
Glasswool (man-made fibers)	1111
Glu-P-1 {2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole}	67730114
Glu-P-2 {2-Aminodipyrido[1,2-a:3',2'-d]imidazole}	67730103
Glutaraldehyde	111308
Glycidaldehyde	765344
Glycidol	556525
Glycol ethers (and their acetates)	1115
Griseofulvin	126078
Gyromitrin	16568028
Halazepam	23092173
HC Blue 1	2784943
Heptachlor epoxide	1024573
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachlorocyclohexanes (mixed or technical grade)	608731
Hexachlorocyclopentadiene	77474
Hexachloronaphthalene	1335871
Hexamethylene-1,6-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydrazine sulfate	10034932
Hydrochloric acid	7647010
Hydrocyanic acid	74908
Hydrogen bromide	10035106
Hydrogen fluoride	7664393
Hydrogen Selenide	7783075
Hydrogen sulfide	7783064
Hydroquinone	123319
Ifosfamide	3778732
Indeno[1,2,3-cd]pyrene	193395
Iodine-131	24267569
IQ {2-Amino-3-methylimidazo[4,5-f]quinoline}	76180966
Iron dextran complex	9004664
Iron pentacarbonyl	13463406
Isobutyraldehyde	78842
Isocyanates	1125
Isophorone	78591
Isoprene, except from vegetative emission sources	78795
Isopropyl alcohol	67630
Isosafrole	120581
Isotretinoin	4759482
Lactofen	77501634
Lasiocarpine	303344
Lead	7439921

CAS	Substance
319846	alpha-Hexachlorocyclohexane
319857	beta-Hexachlorocyclohexane
334883	Diazomethane
366701	Procarbazine hydrochloride
373024	Nickel acetate
379793	Ergotamine tartrate
434071	Oxymetholone
443481	Metronidazole
446866	Azathioprine
463581	Carbonyl sulfide
474259	Chenodiol
484208	5-Methoxypsoralen
492808	Auramine
494031	N-N-Bis(2-chloroethyl)-2-naphthylamine {Chlornaphazine}
505602	Mustard gas
509148	Tetranitromethane
512561	Trimethyl phosphate
513371	Dimethylvinylchloride {DMVC}
528290	o-Dinitrobenzene
531760	Merphalan
531828	N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide
532274	2-Chloroacetophenone
534521	4,6-Dinitro-o-cresol
540590	1,2-Dichloroethylene
540738	1,2-Dimethylhydrazine
540841	2,2,4-Trimethylpentane
540885	t-Butyl acetate
541413	Ethyl chloroformate
541731	1,3-Dichlorobenzene
542881	Bis(chloromethyl) ether
546883	Acetohydroxamic acid
554132	Lithium carbonate
555840	1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone
556525	Glycidol
563473	3-Chloro-2-methylpropene
564250	Doxycycline
569619	C. I. Basic Red 9 monohydrochloride
569642	C. I. Basic Green 4
584849	Toluene-2,4-diisocyanate
590965	Methylazoxymethanol
592621	Methylazoxymethanol acetate
593602	Vinyl bromide
593748	Methyl mercury
595335	Megestrol acetate
602879	5-Nitroacenaphthene
606202	2,6-Dinitrotoluene
607578	2-Nitrofluorene
608731	Hexachlorocyclohexanes (mixed or technical grade)
613354	N,N'-Diacetylbenzidine
615054	2,4-Diaminoanisole
615532	N-Nitroso-N-methylurethane
621647	N-Nitrosodi-n-propylamine
624839	Methyl isocyanate
629141	Ethylene glycol diethyl ether
630080	Carbon monoxide
630933	Diphenylhydantoin

Substance	CAS
Lead acetate	301042
Lead chromate	7758976
Lead compounds (inorganic)	1128
Lead compounds (other than inorganic)	1129
Lead phosphate	7446277
Lead subacetate	1335326
Lindane {gamma-Hexachlorocyclohexane}	58899
Lithium carbonate	554132
Lithium citrate	919164
Lorazepam	846491
Lubricant base oils	1131
Maleic anhydride	108316
Mancozeb	8018017
Maneb	12427382
Manganese	7439965
m-Cresol	108394
m-Dinitrobenzene	99650
Medroxyprogesterone	71589
Megestrol acetate	595335
MEK	78933
Melphalan	148823
Menotropins	9002680
Mercaptopurine	6112761
Mercuric chloride	7487947
Mercury	7439976
Merphalan	531760
Mestranol	72333
Methacycline hydrochloride	3963959
Methane	74828
Methanol	67561
Methimazole	60560
Methotrexate	59052
Methotrexate sodium	15475566
Methoxychlor	72435
Methyl acrylate	96333
Methyl bromide {Bromomethane}	74839
Methyl chloride {Chloromethane}	74873
Methyl chloroform {1,1,1-Trichloroethane}	71556
Methyl ethyl ketone	78933
Methyl hydrazine	60344
Methyl iodide {Iodomethane}	74884
Methyl isobutyl ketone {Hexone}	108101
Methyl isocyanate	624839
Methyl mercury	593748
Methyl methacrylate	80626
Methyl methanesulfon	66273
Methyl tert-butyl ether	1634044
Methylazoxymethanol	590965
Methylazoxymethanol acetate	592621
Methylene bromide	74953
Methylene chloride {Dichloromethane}	75092
Methylene diphenyl diisocyanate {MDI}	101688
Methyltestosterone	58184
Methylthiouracil	56042
Metiram	9006422
Metronidazole	443481

EXHIBIT 1

CAS	Substance
636215	o-Toluidine hydrochloride
680319	Hexamethylphosphoramide
712685	2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole
759739	N-Nitroso-N-ethylurea
764410	1,4-Dichloro-2-butene
765344	Glycidaldehyde
794934	Panfuran S
811972	1,1,1,2-Tetrafluoroethane {HFC-134a}
822060	Hexamethylene-1,6-diisocyanate
838880	4,4'-Methylene bis(2-methylaniline)
846491	Lorazepam
846504	Temazepam
919164	Lithium citrate
924163	N-Nitrosodi-n-butylamine
924425	N-Methyloacrylamide
930552	N-Nitrosopyrrolidine
961115	Tetrachlorvinphos
989388	C. I. Basic Red 1
1024573	Heptachlor epoxide
1120714	1,3-Propane sultone
1163195	Decabromodiphenyl oxide
1271289	Nickelocene
1309644	Antimony trioxide
1310732	Sodium hydroxide
1313275	Molybdenum trioxide
1313991	Nickel oxide
1314132	Zinc oxide
1314201	Thorium dioxide
1314563	Phosphorus pentoxide
1314621	VANADIUM PENTOXIDE
1319773	Cresols (mixtures of) {Cresylic acid}
1330207	Xylene
1332214	Asbestos
1333820	Chromium trioxide
1335326	Lead subacetate
1335871	Hexachloronaphthalene
1336363	PCBs {Polychlorinated biphenyls}
1344281	Aluminum oxide (fibrous)
1405103	Neomycin sulfate
1464535	Diepoxybutane
1582098	Trifluralin
1596845	Daminozide
1615801	1,2-Diethylhydrazine
1620219	Chlorcyclizine hydrochloride
1634044	Methyl tert-butyl ether
1689845	Bromoxynil
1694093	Benzyl violet 4B
1746016	2,3,7,8-Tetrachlorodibenzo-P-Dioxin
1836755	Nitrofen (technical grade)
1897456	Chlorothalonil
1937377	Direct Black 38
2068782	Vincristine sulfate
2092560	D and C Red No. 8
2164172	Fluometuron
2234131	Octachloronaphthalene
2303164	Diallate

Substance	CAS
Michler's ketone	90948
Midazolam hydrochloride	59467968
MIK	108101
Mineral fibers (fine: man-made)	1136
Mineral fibers (other than man-made)	1135
Mineral oils (untreated and mildly treated oils)	1140
Mirex	2385855
Misoprostol	62015398
Mitomycin C	50077
Mitoxantrone hydrochloride	70476823
Molybdenum trioxide	1313275
Monocrotaline	315220
Mustard gas	505602
m-Xylene	108383
N,N'-Diacetylbenzidine	613354
N,N-Dimethylaniline	121697
N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide	531828
Nafarelin acetate	86220420
Nafenopin	3771195
Naphthalene	91203
n-Butyl alcohol	71363
n-Dioctyl phthalate	117840
Neomycin sulfate	1405103
Netilmicin sulfate	56391572
Nickel	7440020
Nickel acetate	373024
Nickel carbonate	3333673
Nickel carbonyl	13463393
Nickel hydroxide	12054487
Nickel oxide	1313991
Nickel refinery dust	1146
Nickel subsulfide	12035722
Nickelocene	1271289
Nicotine	54115
Niridazole	61574
Nitric acid	7697372
Nitrilotriacetic acid (salts)	1148
Nitrilotriacetic acid, trisodium salt monohydrate	18662538
Nitrobenzene	98953
Nitrofen (technical grade)	1836755
Nitrofurantoin	67209
Nitrofurazone	59870
Nitrogen Dioxide	10102440
Nitrogen mustard	51752
Nitrogen mustard hydrochloride	55867
Nitrogen mustard N-oxide	302705
Nitroglycerin	55630
Nitrous oxide	10024972
N-Methyl-N'-nitro-N-nitrosoguanidine	70257
N-Methyloacrylamide	924425
N-N-Bis(2-chloroethyl)-2-naphthylamine {Chlornaphazine}	494031
N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
N-Nitrosodi-n-butylamine	924163
N-Nitrosodi-n-propylamine	621647
N-Nitrosodiphenylamine	86306

CAS	Substance
2385855	Mirex
2475458	Disperse Blue 1
2551624	Sulfur Hexafluoride
2602462	Direct Blue 6
2646175	Oil Orange SS
2784943	HC Blue 1
2795393	Perfluorooctanoic acid {PFOA} (and its salts, esters, and sulfonates)
2807309	Ethylene glycol monopropyl ether
2832408	C. I. Disperse Yellow 3
3068880	beta-Butyrolactone
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin
3333673	Nickel carbonate
3468631	D and C Orange No. 1
3546109	Phenesterin
3564098	Ponceau 3R
3570750	2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole
3688537	AF-2
3697243	5-Methylchrysene
3761533	Ponceau MX
3771195	Nafenopin
3778732	Ifosfamide
3810740	Streptomycin sulfate
3963959	Methacycline hydrochloride
4170303	Crotonaldehyde
4342034	Dacarbazine
4549400	N-Nitrosomethylvinylamine
4680788	C. I. Acid Green 3
4759482	Isotretinoin
5160021	D and C Red No. 9
5216251	p-alpha,alpha,alpha-Tetrachlorotoluene
5411223	Benzphetamine hydrochloride
5522430	1-Nitropyrene
6109973	3-Amino-9-ethylcarbazole hydrochloride
6112761	Mercaptopurine
6164983	Chlordimeform
6358538	Citrus Red No. 2
6484522	Ammonium nitrate
6533002	Norgestrel
7429905	Aluminum
7439921	Lead
7439965	Manganese
7439976	Mercury
7440020	Nickel
7440224	Silver
7440280	Thallium
7440360	Antimony
7440382	Arsenic
7440393	Barium
7440417	Beryllium
7440439	Cadmium
7440473	Chromium
7440484	Cobalt
7440508	Copper
7440622	Vanadium (fume or dust)
7440666	Zinc
7446095	Sulfur Dioxide

Substance	CAS
N-Nitrosomethylethylamine	10595956
N-Nitrosomethylvinylamine	4549400
N-Nitrosomorpholine	59892
N-Nitroso-N-ethylurea	759739
N-Nitroso-N-methylurethane	615532
N-Nitrosonornicotine	16543558
N-Nitrosopiperidine	100754
N-Nitrosopyrrolidine	930552
N-Nitrososarcosine	13256229
Norethisterone	68224
Norgestrel	6533002
o-Aminoazotoluene	97563
o-Anisidine hydrochloride	134292
Ochratoxin A	303479
o-Cresol	95487
Octachloronaphthalene	2234131
o-Dinitrobenzene	528290
Oil Orange SS	2646175
OLEUM	8014957
Osmium tetroxide	20816120
o-Toluidine hydrochloride	636215
Oxides of Nitrogen	42603
Oxides of sulfur	42401
o-Xylene	95476
Oxymetholone	434071
Oxytetracycline	79572
Ozone	10028156
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	1151
PAHs, total, with individ. components also reported	1150
p-alpha,alpha,alpha-Tetrachlorotoluene	5216251
p-Aminoazobenzene	60093
Panfuran S	794934
p-Anisidine	104949
Paramethadione	115673
Parathion	56382
Particulate Matter	11101
Particulate Matter 1	85101
Particulate Matter 2.5 Microns or less	88101
PCBs {Polychlorinated biphenyls}	1336363
p-Chloroaniline	106478
p-Chloro-o-toluidine	1059
p-Chloro-o-toluidine	95692
p-Cresidine	120718
p-Cresol	106445
p-Dichlorobenzene	106467
p-Dinitrobenzene	100254
Penicillamine	52675
Pentachloronitrobenzene {Quintobenzene}	82688
Pentachlorophenol	87865
Pentobarbital sodium	57330
Peracetic acid	79210
Perchloroethylene {Tetrachloroethene}	127184
Perfluorooctanoic acid {PFOA} (and its salts, esters, and sulfonates)	2795393
Perylene	198550
PGME	107982
PGME Acetate	108656

CAS	Substance
7446277	Lead phosphate
7446346	Selenium sulfide
7446719	Sulfur Trioxide
7487947	Mercuric chloride
7496028	6-Nitrochrysene
7550450	Titanium tetrachloride
7631869	Silica, crystalline
7647010	Hydrochloric acid
7664382	Phosphoric acid
7664393	Hydrogen fluoride
7664417	Ammonia
7664939	Sulfuric acid
7697372	Nitric acid
7719122	Phosphorus trichloride
7723140	Phosphorus
7726956	Bromine
7758012	Potassium bromate
7758976	Lead chromate
7782492	Selenium
7782505	Chlorine
7783064	Hydrogen sulfide
7783075	Hydrogen Selenide
7783202	Ammonium sulfate
7784421	Arsine
7789062	Strontium chromate
7789302	Bromine Pentafluoride
7803512	Phosphine
8007452	Coal tars
8014957	OLEUM
8018017	Mancozeb
9002680	Menotropins
9004664	Iron dextran complex
9006422	Metiram
10024972	Nitrous oxide
10025873	Phosphorus oxychloride
10026138	Phosphorus pentachloride
10028156	Ozone
10034932	Hydrazine sulfate
10035106	Hydrogen bromide
10048132	Sterigmatocystin
10049044	Chlorine dioxide
10102440	Nitrogen Dioxide
10294403	Barium chromate
10588019	Sodium dichromate
10595956	N-Nitrosomethylethylamine
12035722	Nickel subsulfide
12054487	Nickel hydroxide
12122677	Zineb
12427382	Maneb
12510428	Erionite
13010474	1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU}
13121705	Cyhexatin
13256229	N-Nitrososarcosine
13311847	Flutamide
13463393	Nickel carbonyl
13463406	Iron pentacarbonyl

Substance	CAS
Phenacemide	63989
Phenacetin	62442
Phenanthrene	85018
Phenazopyridine hydrochloride	94780
Phenesterin	3546109
Phenobarbital	50066
Phenol	108952
Phenoxybenzamine	59961
Phenoxybenzimide hydrochloride	63923
Phenyl glycidyl ether	122601
Phenytoin	57410
Phosgene	75445
Phosphine	7803512
Phosphoric acid	7664382
Phosphorus	7723140
Phosphorus oxychloride	10025873
Phosphorus pentachloride	10026138
Phosphorus pentoxide	1314563
Phosphorus trichloride	7719122
Phthalic anhydride	85449
Picric acid	88891
Pipobroman	54911
Plicamycin	18378897
p-Nitrosodiphenylamine	156105
Polybrominated biphenyls	1155
Polybrominated diphenyl ethers {PBDEs}	2222
Polygeenan	53973981
Ponceau 3R	3564098
Ponceau MX	3761533
Potassium bromate	7758012
p-Phenylenediamine	106503
Procarbazine hydrochloride	366701
Progesterone	57830
Progestins	1160
Propionaldehyde	123386
Propoxur	114261
Propylene	115071
Propylene glycol monomethyl ether	107982
Propylene glycol monomethyl ether acetate	108656
Propylene oxide	75569
Propylthiouracil	51525
p-Toluidine	106490
p-Xylene	106423
Pyrene	129000
Pyridine	110861
Quinoline	91225
Quinone	106514
Radionuclides	1165
Radon and its decay	1166
Reactive Organic Gas	16113
Retinol/retinyl este	1167
Ribavirin	36791045
Rockwool (man-made fibers)	1168
Saccharin	81072
Safrole	94597
sec-Butyl alcohol	78922

CAS	Substance
13647353	Trilostane
13765190	Calcium chromate
13909096	1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea {Methyl CCNU}
14901087	Cycasin
15475566	Methotrexate sodium
15663271	Cisplatin
15972608	Alachlor
16071866	Direct Brown 95 (technical grade)
16543558	N-Nitrosonornicotine
16568028	Gyromitrin
17230885	Danazol
18378897	Plicamycin
18540299	Chromium, hexavalent
18662538	Nitrilotriacetic acid, trisodium salt monohydrate
18883664	Streptozotocin
19408743	1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin
20325400	3,3'-Dimethoxybenzidine dihydrochloride
20816120	Osmium tetroxide
20830813	Daunomycin
21725462	Cyanazine
23092173	Halazepam
23214928	Adriamycin
23541506	Daunorubicin hydrochloride
24267569	Iodine-131
25013165	Butylated hydroxyanisole {BHA}
25154545	Dinitrobenzenes (mixitures of)
25167833	TETRACHLOROPHENOLS
25265718	Dipropylene glycol
25321146	Dinitrotoluenes (mixed isomers)
25321226	Dichlorobenzenes (mixed isomers)
25551137	TRIMETHYLBENZENES
26148685	A-alpha-C {2-Amino-9H-pyrido[2,3-b]indole}
26471625	TOLUENE DIISOCYANATE
26995915	Urofollitropin
28434868	3,3'-Dichloro-4,4'-diaminodiphenyl ether
28911015	Triazolam
28981977	Alprazolam
30402154	Total Pentachlorodibenzofuran
31508006	2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)
32598133	3,3',4,4'-TETRACHLORBIPHENYL (PCB77)
32598144	2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}
32774166	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)
33419420	Etoposide
34256821	Acetochlor
34465468	Total Hexachlorodibenzo-p-dioxin
34590948	Dipropylene glycol monomethyl ether
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin
36088229	Total Pentachlorodibenzo-p-dioxin
36791045	Ribavirin
37871004	Total Heptachlorodibenzo-p-dioxin
38380084	2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)
38998753	Total Heptachlorodibenzofuran
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran
39156417	2,4-Diaminoanisole sulfate
39227286	1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin
39300453	Dinocap

Substance	CAS
Selenium	7782492
Selenium sulfide	7446346
Shale oils	1180
Silica, crystalline	1175
Silica, crystalline	7631869
Silver	7440224
Slagwool (man-made fibers)	1181
Sodium dichromate	10588019
Sodium hydroxide	1310732
Sodium o-phenylphenate	132274
Sodium saccharin	128449
Soots	1185
Sterigmatocystin	10048132
Streptomycin sulfate	3810740
Streptozotocin	18883664
Strontium chromate	7789062
Styrene	100425
Styrene oxide	96093
Sulfallate	95067
Sulfates	9960
Sulfur Dioxide	7446095
Sulfur Hexafluoride	2551624
Sulfur Trioxide	7446719
Sulfuric acid	7664939
SULFURIC ACID+OLEUM	9961
t-Butyl acetate	540885
Talc containing asbestiform fibers	1190
Tamoxifen citrate	54965241
Temazepam	846504
Terephthalic acid	100210
tert-Butyl alcohol	75650
Testosterone and its esters	58220
Testosterone enanthate	315377
TETRACHLOROPHENOLS	25167833
Tetrachlorvinphos	961115
Tetracycline hydrochoride	64755
Tetranitromethane	509148
Thalidomide	50351
Thallium	7440280
Thioacetamide	62555
Thioguanine	154427
Thorium dioxide	1314201
Titanium tetrachloride	7550450
Tobacco products, smokeless	1200
Tobramycin sulfate	49842071
Toluene	108883
TOLUENE DIISOCYANATE	26471625
Toluene-2,4-diisocyanate	584849
Toluene-2,6-diisocyanate	91087
Total Heptachlorodibenzofuran	38998753
Total Heptachlorodibenzo-p-dioxin	37871004
Total Hexachlorodibenzofuran	55684941
Total Hexachlorodibenzo-p-dioxin	34465468
Total Organic Gases	43101
Total Pentachlorodibenzofuran	30402154
Total Pentachlorodibenzo-p-dioxin	36088229

CAS	Substance
39635319	2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)
39831555	Amikacin sulfate
40321764	1,2,3,7,8-Pentachlorodibenzo-P-dioxin
41575944	Carboplatin
41903575	Total Tetrachlorodibenzo-p-dioxin
42397648	1,6-Dinitropyrene
42397659	1,8-Dinitropyrene
49842071	Tobramycin sulfate
51207319	2,3,7,8-Tetrachlorodibenzofuran
52663726	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)
53973981	Polygeenan
54350480	Etretinate
54965241	Tamoxifen citrate
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran
55684941	Total Hexachlorodibenzofuran
55722275	Total Tetrachlorodibenzofuran
55738540	trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl-1,3,4-oxadiazol
56391572	Netilmicin sulfate
57117314	2,3,4,7,8-Pentachlorodibenzofuran
57117416	1,2,3,7,8-Pentachlorodibenzofuran
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran
57465288	3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)
57653857	1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin
57835924	4-Nitropyrene
59467968	Midazolam hydrochloride
60153493	3-(N-Nitrosomethylamino)propionitrile
60568050	Furmecyclox
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran
62015398	Misoprostol
62450060	Trp-P-1 {3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}
62450071	Trp-P-2 {3-Amino-1-methyl-5H-pyrido[4,3-b]indole}
62476599	Acifluorfen
64091914	4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone {NNK}
65510443	2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran
67730103	Glu-P-2 {2-Aminodipyrido[1,2-a:3',2'-d]imidazole}
67730114	Glu-P-1 {2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole}
68006837	2-Amino-3-methyl-9H-pyrido(2,3-b) indole {MeA-alpha-C}
69782907	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)
70362504	3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)
70476823	Mitoxantrone hydrochloride
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran
74472370	2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)
76180966	IQ {2-Amino-3-methylimidazo[4,5-f]quinoline}
77501634	Lactofen
86220420	Nafarelin acetate

Substance	CAS
Total Tetrachlorodibenzofuran	55722275
Total Tetrachlorodibenzo-p-dioxin	41903575
trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl-1,3,4-oxadiazol	55738540
Treosulfan	299752
Triazolam	28911015
Tributyl phosphate	126738
Trichlorfon	52686
Trichloroethylene	79016
Trichlorofluoromethane {Freon 11}	75694
Triethyl phosphine	78400
Triethylamine	121448
Triethylene glycol dimethyl ether	112492
Trifluoromethane {Freon 23}	75467
Trifluralin	1582098
Trilostane	13647353
Trimethadione	127480
Trimethyl phosphate	512561
TRIMETHYLBENZENES	25551137
Triorthocresyl phosphate	78308
Triphenyl phosphate	115866
Triphenyl phosphite	101020
Tris(1-aziridinyl) phosphine sulfide	52244
Tris(2,3-dibromopropyl)phosphate	126727
Tris(aziridinyl)-p-benzoquinone	68768
Trp-P-1 {3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}	62450060
Trp-P-2 {3-Amino-1-methyl-5H-pyrido[4,3-b]indole}	62450071
Trypan blue	72571
Uracil mustard	66751
Urethane	51796
Urofollitropin	26995915
Valproate	99661
Vanadium (fume or dust)	7440622
VANADIUM PENTOXIDE	1314621
Vinblastine sulfate	143679
Vincristine sulfate	2068782
Vinyl acetate	108054
Vinyl bromide	593602
Vinyl chloride	75014
Vinyl fluoride	75025
Vinylidene chloride	75354
Volatile Organic Compounds (VOC)	43104
Warfarin	81812
Wood preservatives (containing arsenic and chromate)	1206
Xylene	1330207
Zinc	7440666
Zinc oxide	1314132
Zineb	12122677

Name	**Emissions from Publically Owned Treatment Works (POTW)**						
Applicability	Use this spreadsheet when the emissions are from a Publically Owned Treatment Works (POTW) or Wastewater Treatment Plant (WWTP). Entries required in yellow areas, output in grey areas.						
Author or updater	Matthew Cegielski		*Last Update*	June 12, 2013			
Facility:							
ID#:							
Project #:							

Inputs	Million Gallons/Day	Operation Hrs/yr	**Formula**
Process Rate	4.02E+01	8,760.0	Enter the process rate in Million Gallons/Day (MGD) and the hours of operation. The Wastewater flow is converted to lbs/hr and lbs/yr for use with the emission factor table below. Emissions are determined by the multiplications of the wastewater flow and the concentration of the pollutant (ppb). The General Mass Balance Method (GMBM) does not take into account the removal and air stripping mechanisms (MMBM Tables Group A-F) of the different processes while the Modified Mass Balance Method (MMBM) does. Enter a Y or N for the processes used at the plant. Typically Primary and Secondary treatment are used with Sludge drying and Chlorine being optional.
	lbs/hr	lbs/yr	
Wastewater Flow	1.397E+07	1.224E+11	
	Y/N		
Primary Treatment	Y		
Secondary Treatment	Y		
Sludge Drying Beds	Y		
Chlorine Contact Tank	n		

Substances	**CAS#**	**Wastewater Pollutant Concentration (ug/L, ppb)**	**GMBM LB/HR**	**GMBM LB/YR**	**MMBM LB/HR**	**MMBM LB/YR**
Ammonia	**7664417**	3.00E+02	4.184E+00	3.665E+04	7.949E-01	6.964E+03
Benzene	**71432**	5.80E-01	8.102E-03	7.098E+01	4.020E+01	1.992E+01
Chloroform	**67663**	8.10E+00	1.132E-01	9.912E+02	3.250E-02	2.847E+02
Ethyl Benzene	**100414**	2.25E+00	3.143E-02	2.753E+02	8.823E-03	7.729E+01
Hydrogen Sulfide	**7783064**	1.95E+01	2.724E-01	2.386E+03	2.013E-01	1.763E+03
Methyl chloroform (1,1,1-Trichloroethane)	**71556**	2.65E+00	3.702E-02	3.243E+02	1.063E-02	9.314E+01
Methylene Chloride (Dichloromethane)	**75092**	7.80E+00	1.090E-01	9.545E+02	3.129E-02	2.741E+02
p-Dichlorobenzene	**106467**	4.65E+00	6.496E-02	5.690E+02	1.866E-02	1.634E+02
Phenol	**108952**	9.80E+00	1.369E-01	1.199E+03	9.583E-03	8.395E+01
Styrene	**100425**	5.00E+00	6.985E-02	6.119E+02	1.961E-02	1.718E+02
Toluene	**108883**	4.90E+00	6.845E-02	5.996E+02	1.922E-02	1.683E+02
Trichloroethylene	**79016**	2.60E+00	3.632E-02	3.182E+02	1.043E-02	9.138E+01
Xylene	**1330207**	5.86E+00	8.186E-02	7.171E+02	2.298E-02	2.013E+02

References:

*District Emission Factor Report *Fugitive Air Emission Factors and (ug/L) Concentration Values for Wastewater Treatment Plants (POTWS)* November 1993.

No Entries are required on these tables

Group A

	Benzene	Ethyl Benzene	Styrene	Toluene	Xylene
Primary Treatment	8.102E-04	3.143E-03	6.985E-03	6.845E-03	8.186E-03
Secondary Treatment	1.458E-03	5.658E-03	1.257E-02	1.232E-02	1.474E-02
Sludge Drying Beds	5.834E-06	2.263E-05	5.029E-05	4.928E-05	5.894E-05
Chlorine Contact Tank	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total Lbs/hr	4.020E+01	8.823E-03	1.961E-02	1.922E-02	2.298E-02

	Benzene	Ethyl Benzene	Styrene	Toluene	Xylene
Primary Treatment	7.098E+00	2.753E+01	6.119E+01	5.996E+01	7.171E+01
Secondary Treatment	1.278E+01	4.956E+01	1.101E+02	1.079E+02	1.291E+02
Sludge Drying Beds	5.110E-02	1.982E-01	4.405E-01	4.317E-01	5.163E-01
Chlorine Contact Tank	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total Lbs/Yr	1.992E+01	7.729E+01	1.718E+02	1.683E+02	2.013E+02

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0.4	0.4	0.4	0.1	0.1	0.1
0.6	0.564	0.94	0.964	0.3	0.18	0.28
0.036	0.036	1	1	0.02	0.00072	0.28072
0	0	1	1	0	0	0.28072
0	1					

Emissions of a pollutant at each treatment step utilized are a result of the the pollutants GMBM rate (Main worksheet) multiplied by the amount volatized. The amount volatized is determined by the product of the Air Stripping Factor and the input amount left after each treatment process has removed a portion of the pollutant (Will default to 0 if that process step is not used). The Removal factor is the portion of the pollutant removed by that particular process. The totals for each pollutant are linked to the MMBM column on the main worksheet.

Group B

	Methyl chloroform	Methylene Chloride	p-Dichloro benzene	Trichloro ethylene
Primary Treatment	3.702E-03	1.090E-02	6.496E-03	3.632E-03
Secondary Treatment	6.663E-03	1.961E-02	1.169E-02	6.538E-03
Sludge Drying Beds	2.665E-04	7.845E-04	4.677E-04	2.615E-04
Chlorine Contact Tank	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total Lbs/hr	1.063E-02	3.129E-02	1.866E-02	1.043E-02

	Methyl chloroform	Methylene Chloride	p-Dichloro benzene	Trichloro ethylene
Primary Treatment	3.243E+01	9.545E+01	5.690E+01	3.182E+01
Secondary Treatment	5.837E+01	1.718E+02	1.024E+02	5.727E+01
Sludge Drying Beds	2.335E+00	6.872E+00	4.097E+00	2.291E+00
Chlorine Contact Tank	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total Lbs/Yr	9.314E+01	2.741E+02	1.634E+02	9.138E+01

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0.4	0.4	0.4	0.1	0.1	0.1
0.6	0.42	0.7	0.82	0.3	0.18	0.28
0.18	0.162	0.9	0.982	0.04	0.0072	0.2872
0.018	0.0162	0.9	0.9982	0	0	0.2872
0.0018	0.9982					

Group C

	Phenol
Primary Treatment	1.369E-03
Secondary Treatment	8.214E-03
Sludge Drying Beds	0.000E+00
Chlorine Contact Tank	0.000E+00
Total Lbs/hr	9.583E-03

	Phenol
Primary Treatment	1.199E+01
Secondary Treatment	7.196E+01
Sludge Drying Beds	0.000E+00
Chlorine Contact Tank	0.000E+00
Total Lbs/Yr	8.395E+01

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0.4	0.4	0.4	0.01	0.01	0.01
0.6	0.444	0.74	0.844	0.1	0.06	0.07
0.156	0.15288	0.98	0.99688	0	0	0.07
0.00312	0.003058	0.98	0.999938	0	0	0.07
0.000062	0.999938					

Group D

	Chloroform
Primary Treatment	1.132E-02
Secondary Treatment	2.037E-02
Sludge Drying Beds	8.147E-04
Chlorine Contact Tank	0.000E+00
Total Lbs/hr	3.250E-02

	Chloroform
Primary Treatment	9.912E+01
Secondary Treatment	1.784E+02
Sludge Drying Beds	7.137E+00
Chlorine Contact Tank	0.000E+00
Total Lbs/Yr	2.847E+02

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0.4	0.4	0.4	0.1	0.1	0.1
0.6	0.42	0.7	0.82	0.3	0.18	0.28
0.18	0.162	0.9	0.982	0.04	0.0072	0.2872
0.018	0.01656	0.92	0.99856	0.02	0	0.2872
0.001440	0.99856					

Group E

	Ammonia
Primary Treatment	0.000E+00
Secondary Treatment	4.184E-01
Sludge Drying Beds	3.765E-01
Chlorine Contact Tank	0.000E+00
Total Lbs/hr	7.949E-01

	Ammonia
Primary Treatment	0.000E+00
Secondary Treatment	3.665E+03
Sludge Drying Beds	3.299E+03
Chlorine Contact Tank	0.000E+00
Total Lbs/Yr	6.964E+03

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0	0	0	0	0	0
1	0.1	0.1	0.1	0.1	0.1	0.1
0.9	0.18	0.2	0.28	0.1	0.09	0.19
0.72	0.18	0.25	0.46	0.05	0	0.19
0.540000	0.46					

Group F

	Hydrogen Sulfide
Primary Treatment	1.907E-01
Secondary Treatment	8.172E-03
Sludge Drying Beds	2.452E-03
Chlorine Contact Tank	0.000E+00
Total Lbs/hr	2.013E-01

	Hydrogen Sulfide
Primary Treatment	1.670E+03
Secondary Treatment	7.159E+01
Sludge Drying Beds	2.148E+01
Chlorine Contact Tank	0.000E+00
Total Lbs/Yr	1.763E+03

Input	Removed by Process	Removal Factor	Total Removal	Air Stripping Factor	Volatized	Total Volatized
1	0.7	0.7	0.7	0.7	0.7	0.7
0.3	0.24	0.8	0.94	0.1	0.03	0.73
0.06	0.057	0.95	0.997	0.15	0.009	0.739
0.003	0.003	1	1	0.05	0	0.739
0.000000	1					

Name

Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in grey areas.		
Author or updater	Matthew Cegielski	*Last Update*	August 20, 2018
Facility: **ID#:** **Project #:** **Unit and Process#**	1-0 p1		
Operating Hours hr/yr	8,760.00		

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	1.22E+02	7.90E+00	0.00E+00	1.22E+02
100≤R<250	**0.250**	3.05E+01	1.98E+00	0.00E+00	3.05E+01
250≤R<500	**0.040**	4.88E+00	3.16E-01	0.00E+00	4.88E+00
500≤R<1000	**0.011**	1.34E+00	8.69E-02	0.00E+00	1.34E+00
1000≤R<1500	**0.003**	3.66E-01	2.37E-02	0.00E+00	3.66E-01
1500≤R<2000	**0.002**	2.44E-01	1.58E-02	0.00E+00	2.44E-01
2000<R	**0.001**	1.22E-01	7.90E-03	0.00E+00	1.22E-01

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

1-0 p1

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Ammonia	**7664417**	3.67E+04	4.18E+00	4.18E+00	0.00E+00	3.14E+00	0.00E+00
Benzene	**71432**	7.10E+01	8.10E-03	8.10E-03	1.58E+01	4.05E-01	0.00E+00
Chloroform	**67663**	9.91E+02	1.13E-01	1.13E-01	4.05E+01	5.66E-02	0.00E+00
Ethyl benzene	**100414**	2.75E+02	3.14E-02	3.14E-02	5.30E+00	2.36E-03	0.00E+00
Hydrogen sulfide	**7783064**	2.39E+03	2.72E-01	2.72E-01	0.00E+00	4.09E+00	0.00E+00
Methyl chloroform {1,1,1-Trichloroethane}	**71556**	3.24E+02	3.70E-02	3.70E-02	0.00E+00	5.55E-03	0.00E+00
Methylene chloride {Dichloromethane}	**75092**	9.55E+02	1.09E-01	1.09E-01	7.35E+00	4.09E-02	0.00E+00
p-Dichlorobenzene	**106467**	5.69E+02	6.50E-02	6.50E-02	4.82E+01	1.22E-02	0.00E+00
Phenol	**108952**	1.20E+03	1.37E-01	1.37E-01	0.00E+00	1.03E-01	0.00E+00
Styrene	**100425**	6.12E+02	6.98E-02	6.98E-02	0.00E+00	1.16E-02	0.00E+00
Toluene	**108883**	6.00E+02	6.85E-02	6.85E-02	0.00E+00	3.42E-02	0.00E+00
Trichloroethylene	**79016**	3.18E+02	3.63E-02	3.63E-02	4.90E+00	9.08E-03	0.00E+00
Xylene	**1330207**	7.17E+02	8.19E-02	8.19E-02	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
			Totals	**1.22E+02**	**7.90E+00**	**0.00E+00**	

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Wood preservatives (containing arsenic and chromate)	1206

EXHIBIT 1

Prioritization Calculator

Name

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in grey areas.		
Author or updater	Matthew Cegielski	*Last Update*	August 20, 2018
Facility:			
ID#:			
Project #:			
Unit and Process#	1-0 p1		
Operating Hours hr/yr	10,945.7		

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	3.30E+02	3.92E-01	0.00E+00	3.30E+02
100≤R<250	**0.250**	8.25E+01	9.79E-02	0.00E+00	8.25E+01
250≤R<500	**0.040**	1.32E+01	1.57E-02	0.00E+00	1.32E+01
500≤R<1000	**0.011**	3.63E+00	4.31E-03	0.00E+00	3.63E+00
1000≤R<1500	**0.003**	9.90E-01	1.18E-03	0.00E+00	9.90E-01
1500≤R<2000	**0.002**	6.60E-01	7.83E-04	0.00E+00	6.60E-01
2000<R	**0.001**	3.30E-01	3.92E-04	0.00E+00	3.30E-01

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

1-0 p1

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.43E+02	1.31E-02	1.31E-02	3.30E+02	3.92E-01	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**3.30E+02**	**3.92E-01**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Wood preservatives (containing arsenic and chromate)	1206

Unit and Process#	1-0 p2				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

1-0 p2	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.	
Substance	CAS# Finder
Zinc	7440666

EXHIBIT 1

Unit and Process#	2-0 p1				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

2-0 p1	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.	
Substance	CAS# Finder
Hexane	110543

EXHIBIT 1

Unit and Process#	2-0 p2				
Operating Hours hr/yr	8,760.00				
Receptor Proximity and Proximity Factors	Cancer Score	Chronic Score	Acute Score	Max Score	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.
0< R<100 1.000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
100≤R<250 0.250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
250≤R<500 0.040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
500≤R<1000 0.011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1000≤R<1500 0.003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
1500≤R<2000 0.002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2000<R 0.001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

2-0 p2	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Barium	7440393

Receptor Proximity and Proximity Factors		1-0 p1	1-0 p2	2-0 p1	2-0 p2	
		Max Score	**Max Score**	**Max Score**	**Max Score**	**Total Max Score**
0< R<100	**1.000**	3.30E+02	0.00E+00	0.00E+00	0.00E+00	3.30E+02
100≤R<250	**0.250**	8.25E+01	0.00E+00	0.00E+00	0.00E+00	8.25E+01
250≤R<500	**0.040**	1.32E+01	0.00E+00	0.00E+00	0.00E+00	1.32E+01
500≤R<1000	**0.011**	3.63E+00	0.00E+00	0.00E+00	0.00E+00	3.63E+00
1000≤R<1500	**0.003**	9.90E-01	0.00E+00	0.00E+00	0.00E+00	9.90E-01
1500≤R<2000	**0.002**	6.60E-01	0.00E+00	0.00E+00	0.00E+00	6.60E-01
2000<R	**0.001**	3.30E-01	0.00E+00	0.00E+00	0.00E+00	3.30E-01

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
1,1,2,2-Tetrachloroethane	79345	5.80E-05	0	0
1,1,2-Trichloroethane	79005	1.60E-05	0	0
1,1-Dichloroethane	75343	1.60E-06	0	0
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	1.10E-02	0	0.13
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin	3268879	1.10E-02	0	0.13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	3.80E-01	0	0.004
1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin	35822469	3.80E-01	0	0.004
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	3.80E-01	0	0.004
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	3.80E+00	0	0.0004
1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin	39227286	3.80E+00	0	0.0004
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	3.80E+00	0	0.0004
1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin	57653857	3.80E+00	0	0.0004
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	3.80E+00	0	0.0004
1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin	19408743	3.80E+00	0	0.0004
1,2,3,7,8-Pentachlorodibenzofuran	57117416	1.10E+00	0	0.0013
1,2,3,7,8-Pentachlorodibenzo-P-dioxin	40321764	3.80E+01	0	0.00004
1,2-Dibromo-3-chloropropane	96128	2.00E-03	0	0
1,2-Epoxybutane	106887		0	20
1,3-Butadiene	106990	1.70E-04	660	2
1,3-Propane sultone	1120714	6.90E-04	0	0
1,4-Dioxane	123911	7.70E-06	3000	3000
1,6-Dinitropyrene	42397648	1.10E-02	0	0
1,8-Dinitropyrene	42397659	1.10E-03	0	0
1-Nitropyrene	5522430	1.10E-04	0	0
2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)	39635319	1.10E-03	0	1.3
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380084	1.10E-03	0	1.3
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782907	1.10E-03	0	1.3
2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}	32598144	1.10E-03	0	1.3
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663726	1.10E-03	0	1.3

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)	74472370	1.10E-03	0	1.3
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508006	1.10E-03	0	1.3
2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)	65510443	1.10E-03	0	1.3
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345	3.80E+00	0	0.0004
2,3,4,7,8-Pentachlorodibenzofuran	57117314	1.10E+01	0	0.00013
2,3,7,8-Tetrachlorodibenzofuran	51207319	3.80E+00	0	0.0004
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	1746016	3.80E+01	0	0.00004
2,4,6-Trichlorophenol	88062	2.00E-05	0	0
2,4-Diaminoanisole	615054	6.60E-06	0	0
2,4-Diaminotoluene	95807	1.10E-03	0	0
2,4-Dinitrotoluene	121142	8.90E-05	0	0
2-Aminoanthraquinone	117793	9.40E-06	0	0
2-Nitrofluorene	607578	1.10E-05	0	0
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774166	1.10E+00	0	0.0013
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465288	3.80E+00	0	0.0004
3,3',4,4'-TETRACHLORBIPHENYL (PCB77)	32598133	3.80E-03	0	0.4
3,3'-Dichlorobenzidine	91941	3.40E-04	0	0
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362504	1.10E-02	0	0.13
3-Methylcholanthrene	56495	6.30E-03	0	0
4,4'-Methylene bis(2 Chloroaniline) (MOCA)	101144	4.30E-04	0	0
4,4'-Methylenedianiline	101779	4.60E-04	0	20
4-Chloro-o-phenylenediamine	**95830**	**4.60E-06**	**0**	**0**
4-Dimethylaminoazobenzene	60117	1.30E-03	0	0
4-Nitropyrene	57835924	1.10E-04	0	0
5-Methylchrysene	3697243	1.10E-03	0	0
5-Nitroacenaphthene	602879	3.70E-05	0	0
6-Nitrochrysene	7496028	1.10E-02	0	0
7,12-Dimethylbenz[a]anthracene	57976	7.10E-02	0	0
7H-Dibenzo[c,g]carbazole	194592	1.10E-03	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Acetaldehyde	75070	2.70E-06	470	140
Acetamide	60355	2.00E-05	0	0
Acrolein	107028		2.5	0.35
Acrylamide	79061	1.30E-03	0	0
Acrylic acid	79107		6000	0
Acrylonitrile	107131	2.90E-04	0	5
Allyl chloride	107051	6.00E-06	0	0
alpha-Hexachlorocyclohexane	319846	1.10E-03	0	0
Ammonia	7664417		3200	200
Aniline	62533	1.60E-06	0	0
Arsenic	7440382	3.30E-03	0.2	0.015
Arsenic compounds (inorganic)	1016	3.30E-03	0.2	0.015
Arsine	7784421		0.2	0.015
Asbestos	1332214	1.90E-04	0	0
Barium chromate	10294403	1.50E-01	0	0.2
Benz[a]anthracene	56553	1.10E-04	0	0
Benzene	71432	2.90E-05	27	3
Benzidine (and its salts)	92875	1.40E-01	0	0
Benzidine-based dyes	1020	1.40E-01	0	0
Benzo[a]pyrene	50328	1.10E-03	0	0
Benzo[b]fluoranthene	205992	1.10E-04	0	0
Benzo[j]fluoranthene	205823	1.10E-04	0	0
Benzo[k]fluoranthene	207089	1.10E-04	0	0
Benzyl chloride	100447	4.90E-05	240	0
Beryllium	7440417	2.40E-03	0	0.007
beta-Hexachlorocyclohexane	319857	1.10E-03	0	0
Bis(2-chloroethyl) ether {DCEE}	**111444**	**7.10E-04**	**0**	**0**
Bis(chloromethyl) ether	542881	1.30E-02	0	0
Cadmium	7440439	4.20E-03	0	0.02

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Calcium chromate	13765190	1.50E-01	0	0.2
Caprolactam	105602	0.00E+00	50	2.2
Carbon disulfide	75150		6200	800
Carbon monoxide	630080		23000	0
Carbon tetrachloride	56235	4.20E-05	1900	40
Chlorinated paraffin	108171262	2.50E-05	0	0
Chlorine	7782505		210	0.2
Chlorine dioxide	10049044		0	0.6
Chlorobenzene	108907		0	1000
Chloroform	67663	5.30E-06	150	300
Chloropicrin	76062		29	0.4
Chromium trioxide	1333820	1.50E-01	0	0.002
Chromium, hexavalent	18540299	1.50E-01	0	0.2
Chrysene	218019	1.10E-05	0	0
Copper	7440508		100	0
Cresols (mixtures of) {Cresylic acid}	1319773		0	600
Cupferron	135206	6.30E-05	0	0
Cyanide compounds	1073		340	9
CYANIDE COMPOUNDS [Inorganic)	57125		340	9
Di(2-ethylhexyl) phthalate	117817	2.40E-06	0	0
Dibenz[a,h]acridine	226368	1.10E-04	0	0
Dibenz[a,h]anthracene	53703	1.20E-03	0	0
Dibenz[a,j]acridine	224420	1.10E-04	0	0
Dibenzo[a,e]pyrene	192645	1.10E-03	0	0
Dibenzo[a,h]pyrene	189640	1.10E-02	0	0
Dibenzo[a,i]pyrene	189559	1.10E-02	0	0
Dibenzo[a,l]pyrene	191300	1.10E-02	0	0
Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]	1080	3.80E+01		0.00004

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Dichlorodifluoromethene Freon 12	75718	0.00E+00	0	0
Diesel engine exhaust, particulate matter (Diesel PM)	9901	3.00E-04	0	5
Diethanolamine	111422		0	3
Dimethyl formamide	68122		0	80
Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA	1086	3.80E+01	0	0.00004
Direct Black 38	1937377	1.40E-01	0	0
Direct Blue 6	2602462	1.40E-01	0	0
Direct Brown 95 (technical grade)	16071866	1.40E-01	0	0
Epichlorohydrin	106898	2.30E-05	1300	3
Ethyl benzene	100414	2.50E-06	0	2000
Ethyl chloride {Chlorethane)	75003		0	30000
Ethylene dibromide {EDB}	106934	7.10E-05	0	0.8
Ethylene dichloride {EDC}	107062	2.10E-05	0	400
Ethylene glycol	107211		0	400
Ethylene glycol monobutyl ether	111762		14000	0
Ethylene glycol monoethyl ether	110805		370	70
Ethylene glycol monoethyl ether acetate	111159		140	300
Ethylene glycol monomethyl ether	109864		93	60
Ethylene glycol monomethyl ether acetate	110496		0	90
Ethylene oxide	75218	8.80E-05	0	30
Ethylene thiourea	96457	1.30E-05	0	0
Fluorides	1101		240	13
Formaldehyde	50000	6.00E-06	55	9
Glutaraldehyde	111308		0	0.08
Hexachlorobenzene	118741	5.10E-04	0	0
Hexachlorocyclohexanes (mixed or technical grade)	608731	1.10E-03	0	0
Hexane	110543		0	7000
Hydrazine	302012	4.90E-03	0	0.2

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
Hydrochloric acid	7647010		2100	9
Hydrocyanic acid	74908		340	9
Hydrogen fluoride	7664393		240	14
Hydrogen Selenide	7783075		5	0
Hydrogen sulfide	7783064		42	10
Indeno[1,2,3-cd]pyrene	193395	1.10E-04	0	0
Isophorone	78591		0	2000
Isopropyl alcohol	67630		3200	7000
Lead	7439921	1.20E-05	0	0
Lead acetate	301042	1.20E-05	0	0
Lead chromate	7758976	1.50E-01	0	0.2
Lead compounds (inorganic)	1128	1.20E-05	0	0
Lead phosphate	7446277	1.20E-05	0	0
Lead subacetate	1335326	1.20E-05	0	0
Lindane {gamma-Hexachlorocyclohexane}	58899	3.10E-04	0	0
Maleic anhydride	108316		0	0.7
Manganese	7439965		0	0.09
m-Cresol	108394		0	600
Mercuric chloride	7487947		0.6	0.03
Mercury	7439976		0.6	0.03
Methanol	67561		28000	4000
Methyl bromide {Bromomethane}	74839		3900	5
Methyl chloroform {1,1,1-Trichloroethane}	71556		68000	1000
Methyl ethyl ketone	78933		13000	0
Methyl isocyanate	624839		0	1
Methyl tert-butyl ether	1634044	2.60E-07	0	8000
Methylene chloride {Dichloromethane}	75092	1.00E-06	14000	400
Methylene diphenyl diisocyanate {MDI}	101688		12	0.08
Michler's ketone	90948	2.50E-04	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
m-Xylene	108383		22000	700
Naphthalene	91203	3.40E-05	0	9
Nickel	7440020	2.60E-04	0.2	0.014
Nickel acetate	373024	2.60E-04	0.2	0.014
Nickel carbonate	3333673	2.60E-04	0.2	0.014
Nickel carbonyl	13463393	2.60E-04	0.2	0.014
Nickel hydroxide	12054487	2.60E-04	0.2	0.014
Nickel oxide	1313991	2.60E-04	0.2	0.02
Nickel refinery dust	1146	2.60E-04	0.2	0.014
Nickel subsulfide	12035722	2.60E-04	0.2	0.014
Nickelocene	1271289	2.60E-04	0.2	0.014
Nitric acid	7697372		86	0
NITROGEN DIOXIDE	10102440		470	0
N-Nitrosodiethylamine	55185	1.00E-02	0	0
N-Nitrosodimethylamine	62759	4.60E-03	0	0
N-Nitrosodi-n-butylamine	924163	3.10E-03	0	0
N-Nitrosodi-n-propylamine	621647	2.00E-03	0	0
N-Nitrosodiphenylamine	86306	2.60E-06	0	0
N-Nitrosomethylethylamine	10595956	6.30E-03	0	0
N-Nitrosomorpholine	59892	1.90E-03	0	0
N-Nitrosopiperidine	100754	2.70E-03	0	0
N-Nitrosopyrrolidine	930552	6.00E-04	0	0
o-Cresol	95487		0	600
OLEUM	8014957		120	0
o-Xylene	95476		22000	700
Ozone	10028156		180	0
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	1151	1.10E-03	0	0
PCBs {Polychlorinated biphenyls}	1336363	5.70E-04	0	0

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
p-Chloro-o-toluidine	95692	7.70E-05	0	0
p-Cresidine	120718	4.30E-05	0	0
p-Cresol	106445		0	600
p-Dichlorobenzene	106467	1.10E-05	0	800
Pentachlorophenol	87865	5.10E-06	0	0
Perchloroethylene {Tetrachloroethene}	127184	6.10E-06	20000	35
Phenol	108952		5800	200
Phosgene	75445		4	0
Phosphine	7803512		0	0.8
Phosphoric acid	7664382		0	7
Phthalic anhydride	85449		0	20
p-Nitrosodiphenylamine	156105	6.30E-06	0	0
Potassium bromate	7758012	1.40E-04	0	0
Propylene	115071		0	3000
Propylene glycol monomethyl ether	107982		0	7000
Propylene oxide	75569	3.70E-06	3100	30
p-Xylene	106423		22000	700
Selenium	7782492		0	20
Selenium sulfide	7446346		0	20
Silica, crystalline	1175		0	3
Silica, crystalline	7631869		0	3
Sodium dichromate	10588019	1.50E-01	0	0.2
Sodium hydroxide	1310732		8	0
Strontium chromate	7789062	1.50E-01	0	0.2
Styrene	100425		21000	900
Sulfates	9960		120	0
Sulfur Dioxide	7446095		660	0
Sulfur Trioxide	7446719		120	1
Sulfuric acid	7664939		120	1

CAS List

Substance	CAS	URF	Acute REL	Chronic REL
t-Butyl acetate	540885	1.30E-06		
Thioacetamide	62555	1.70E-03	0	0
Toluene	108883		37000	300
TOLUENE DIISOCYANATE	26471625	1.10E-05	2	0.008
Toluene-2,4-diisocyanate	584849	1.10E-05	2	0.008
Toluene-2,6-diisocyanate	91087	1.10E-05	2	0.008
Trichloroethylene	79016	2.00E-06	0	600
Triethylamine	121448		2800	200
Urethane	51796	2.90E-04	0	0
Vanadium (fume or dust)	7440622		30	0
VANADIUM PENTOXIDE	1314621		30	0
Vinyl acetate	108054		0	200
Vinyl chloride	75014	7.80E-05	180000	0
Vinylidene chloride	75354		0	70
XYLENES (mixed xylenes)	1330207		22000	700

CAS	Substance
1000	Aflatoxins
1005	Analgesic mixtures containing phenacetin
1010	Androgenic (anabolic) steroids
1016	Arsenic compounds (inorganic)
1017	Arsenic compounds (other than inorganic)
1020	Benzidine-based dyes
1025	Betel quid with tobacco
1030	Bitumens, extracts of steam-refined and air-refined bitumens
1035	Bleomycins
1050	Carbon black extract
1055	Carrageenan (degraded)
1056	Ceramic fibers (man-made)
1058	Chlorobenzenes
1059	p-Chloro-o-toluidine
1060	Chlorophenols
1065	Chlorophenoxy herbicides
1068	Conjugated estrogens
1070	Creosotes
1073	Cyanide compounds
1075	Dialkylnitrosamines
1078	Diaminotoluenes (mixed isomers)
1080	Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]
1085	Dioxins, total, with individ. isomers also reported {PCDDs}
1086	Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA
1090	Environmental Tobacco Smoke
1091	Epoxy resins
1095	Estrogens, non-steroidal
1100	Estrogens, steroidal
1101	Fluorides
1103	Fluorocarbons (brominated)
1104	Fluorocarbons (chlorinated)
1110	Gasoline vapors
1111	Glasswool (man-made fibers)
1115	Glycol ethers (and their acetates)
1125	Isocyanates
1128	Lead compounds (inorganic)
1129	Lead compounds (other than inorganic)
1131	Lubricant base oils
1135	Mineral fibers (other than man-made)
1136	Mineral fibers (fine: man-made)
1140	Mineral oils (untreated and mildly treated oils)
1146	Nickel refinery dust
1148	Nitrilotriacetic acid (salts)
1150	PAHs, total, with individ. components also reported
1151	PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]
1155	Polybrominated biphenyls
1160	Progestins
1165	Radionuclides
1166	Radon and its decay
1167	Retinol/retinyl este
1168	Rockwool (man-made fibers)
1175	Silica, crystalline
1180	Shale oils
1181	Slagwool (man-made fibers)
1185	Soots
1190	Talc containing asbestiform fibers
1200	Tobacco products, smokeless
1205	alpha-chlorinated Toluenes

Substance	CAS
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea {Methyl CCNU}	13909096
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU}	13010474
1,1,1,2-Tetrafluoroethane {HFC-134a}	811972
1,1,2,2-Tetrachloroethane	79345
1,1,2-Trichloroethane	79005
1,1-Dichloroethane	75343
1,1-Difluoroethane {Freon 152a}	75376
1,1-Dimethylhydrazine	57147
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020
1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin	3268879
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394
1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin	35822469
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269
1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin	39227286
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449
1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin	57653857
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219
1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin	19408743
1,2,3,7,8-Pentachlorodibenzofuran	57117416
1,2,3,7,8-Pentachlorodibenzo-P-dioxin	40321764
1,2,3-Trichloropropane	96184
1,2,4-Trichlorobenze	120821
1,2,4-Trimethylbenze	95636
1,2-Dibromo-3-chloropropane	96128
1,2-Dichlorobenzene	95501
1,2-Dichloroethylene	540590
1,2-Diethylhydrazine	1615801
1,2-Dimethylhydrazine	540738
1,2-Epoxybutane	106887
1,3-Butadiene	106990
1,3-Dichlorobenzene	541731
1,3-Propane sultone	1120714
1,4-Butanediol dimethanesulfonate	55981
1,4-Dichloro-2-butene	764410
1,4-Dioxane	123911
1,6-Dinitropyrene	42397648
1,8-Dinitropyrene	42397659
1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone	555840
1-Amino-2-methylanthraquinone	82280
1-Naphthylamine	134327
1-Nitropyrene	5522430
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	3570750
2,2,4-Trimethylpentane	540841
2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)	39635319
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380084
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782907
2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}	32598144
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663726
2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)	74472370
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508006
2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)	65510443
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345
2,3,4,6-Tetrachlorophenol	58902
2,3,4,7,8-Pentachlorodibenzofuran	57117314
2,3,7,8-Tetrachlorodibenzofuran	51207319
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	1746016
2,3-Dibromo-1-propanol	96139

CAS	Substance
1206	Wood preservatives (containing arsenic and chromate)
2222	Polybrominated diphenyl ethers {PBDEs}
9901	Diesel engine exhaust, particulate matter (Diesel PM)
9902	Diesel engine exhaust, total organic gas
9910	Gasoline engine exhaust, particulate matter
9911	Gasoline engine exhaust, total organic gas
9960	Sulfates
9960	SULFATES
9961	SULFURIC ACID+OLEUM
11101	Particulate Matter
16113	Reactive Organic Gas
42101	Carbon Monoxide [Criteria Pollutant]
42401	Oxides of sulfur
42603	Oxides of Nitrogen
43101	Total Organic Gases
43104	Volatile Organic Compounds (VOC)
50000	Formaldehyde
50066	Phenobarbital
50077	Mitomycin C
50180	Cyclophosphamide
50282	Estradiol 17 beta
50293	DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane}
50328	Benzo[a]pyrene
50351	Thalidomide
50419	Clomiphene citrate
50760	Actinomycin D
50782	Aspirin
51218	Fluorouracil
51285	2,4-Dinitrophenol
51525	Propylthiouracil
51752	Nitrogen mustard
51796	Urethane
52244	Tris(1-aziridinyl) phosphine sulfide
52675	Penicillamine
52686	Trichlorfon
53167	Estrone
53703	Dibenz[a,h]anthracene
54115	Nicotine
54626	Aminopterin
54911	Pipobroman
55185	N-Nitrosodiethylamine
55210	Benzamide
55630	Nitroglycerin
55867	Nitrogen mustard hydrochloride
55981	1,4-Butanediol dimethanesulfonate
56042	Methylthiouracil
56235	Carbon tetrachloride
56382	Parathion
56495	3-Methylcholanthrene
56531	Diethylstilbestrol
56553	Benz[a]anthracene
56757	Chloramphenicol
57125	CYANIDE COMPOUNDS [Inorganic)
57147	1,1-Dimethylhydrazine
57330	Pentobarbital sodium
57410	Phenytoin
57636	Ethinyl estradiol
57830	Progesterone

Substance	CAS
2,3-Dichloropropene	78886
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
2,4-Diaminoanisole	615054
2,4-Diaminoanisole sulfate	39156417
2,4-Diaminotoluene	95807
2,4-Dichlorophenol	120832
2,4-Dimethylphenol {2,4-Xylenol}	105679
2,4-Dinitrophenol	51285
2,4-Dinitrotoluene	121142
2,6-Dinitrotoluene	606202
2,6-Xylidene	87627
2-Amino-3-methyl-9H-pyrido(2,3-b) indole {MeA-alpha-C}	68006837
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	712685
2-Aminoanthraquinone	117793
2-Chloroacetophenone	532274
2-CHLOROPHENOL	95578
2-Methyl naphthalene	91576
2-Methyl-1-nitroanthraquinone (uncertain purity)	129157
2-Methylaziridine	75558
2-Methyllactonitrile	75865
2-Methylpyridine	109068
2-Naphthylamine	91598
2-Nitrofluorene	607578
2-Nitrophenol	88755
2-Nitropropane	79469
2-Phenylphenol	90437
3-(N-Nitrosomethylamino)propionitrile	60153493
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774166
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465288
3,3',4,4'-TETRACHLORBIPHENYL (PCB77)	32598133
3,3'-Dichloro-4,4'-diaminodiphenyl ether	28434868
3,3'-Dichlorobenzidine	91941
3,3'-Dimethoxybenzidine	119904
3,3'-Dimethoxybenzidine dihydrochloride	20325400
3,3'-Dimethylbenzidine {o-Tolidine}	119937
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362504
3-Amino-9-ethylcarbazole hydrochloride	6109973
3-Chloro-2-methylpropene	563473
3-Methylcholanthrene	56495
4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone {NNK}	64091914
4,4'-Diaminodiphenyl ether	101804
4,4'-Isopropylidenediphenol	80057
4,4'-Methylene bis (N,N-dimethyl) benzenamine	101611
4,4'-Methylene bis(2 Chloroaniline) (MOCA)	101144
4,4'-Methylene bis(2-methylaniline)	838880
4,4'-Methylenedianiline	101779
4,4'-Thiodianiline	139651
4,6-Dinitro-o-cresol	534521
4-Chloro-o-phenylenediamine	95830
4-Dimethylaminoazobenzene	60117
4-Nitrobiphenyl	92933
4-Nitrophenol	100027
4-Nitropyrene	57835924
4-Vinyl-1-cyclohexene diepoxide	106876
4-Vinylcyclohexene	100403
5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone	139913
5-Methoxypsoralen	484208

CAS	Substance
57976	7,12-Dimethylbenz[a]anthracene
58184	Methyltestosterone
58220	Testosterone and its esters
58899	Lindane {gamma-Hexachlorocyclohexane}
58902	2,3,4,6-Tetrachlorophenol
59052	Methotrexate
59870	Nitrofurazone
59892	N-Nitrosomorpholine
59961	Phenoxybenzamine
60093	p-Aminoazobenzene
60117	4-Dimethylaminoazobenzene
60344	Methyl hydrazine
60355	Acetamide
60560	Methimazole
60571	Dieldrin
61574	Niridazole
62442	Phenacetin
62500	Ethyl methanesulfonate
62533	Aniline
62555	Thioacetamide
62759	N-Nitrosodimethylamine
63252	Carbaryl
63923	Phenoxybenzimide hydrochloride
63989	Phenacemide
64675	Diethyl sulfate
64755	Tetracycline hydrochoride
66273	Methyl methanesulfon
66751	Uracil mustard
66819	Cycloheximide
67209	Nitrofurantoin
67458	Furazolidone
67561	Methanol
67630	Isopropyl alcohol
67663	Chloroform
68122	Dimethyl formamide
68224	Norethisterone
68768	Tris(aziridinyl)-p-benzoquinone
70257	N-Methyl-N'-nitro-N-nitrosoguanidine
71363	n-Butyl alcohol
71432	Benzene
71556	Methyl chloroform {1,1,1-Trichloroethane}
71589	Medroxyprogesterone
72333	Mestranol
72435	Methoxychlor
72548	Dichlorodiphenyldichloroethane {DDD}
72571	Trypan blue
74828	Methane
74839	Methyl bromide {Bromomethane}
74851	Ethylene
74873	Methyl chloride {Chloromethane}
74884	Methyl iodide {Iodomethane}
74908	Hydrocyanic acid
74953	Methylene bromide
75003	Ethyl chloride {Chlorethane)
75014	Vinyl chloride
75025	Vinyl fluoride
75058	Acetonitrile
75070	Acetaldehyde

Substance	CAS
5-Methylchrysene	3697243
5-Nitroacenaphthene	602879
5-Nitro-o-anisidine	99592
6-Nitrochrysene	7496028
7,12-Dimethylbenz[a]anthracene	57976
7H-Dibenzo[c,g]carbazole	194592
A-alpha-C {2-Amino-9H-pyrido[2,3-b]indole}	26148685
Acenaphthene	83329
Acenaphthylene	208968
Acetaldehyde	75070
Acetamide	60355
Acetochlor	34256821
Acetohydroxamic acid	546883
Acetonitrile	75058
Acetophenone	98862
Acifluorfen	62476599
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Actinomycin D	50760
Adriamycin	23214928
AF-2	3688537
Aflatoxins	1000
Alachlor	15972608
Aldrin	309002
all-trans-Retinoic acid	302794
Allyl alcohol	107186
Allyl chloride	107051
alpha-chlorinated Toluenes	1205
alpha-Hexachlorocyclohexane	319846
Alprazolam	28981977
Aluminum	7429905
Aluminum oxide (fibrous)	1344281
Amikacin sulfate	39831555
Aminoglutethimide	125848
Aminopterin	54626
Ammonia	7664417
Ammonium nitrate	6484522
Ammonium sulfate	7783202
Analgesic mixtures containing phenacetin	1005
Androgenic (anabolic) steroids	1010
Aniline	62533
Anthracene	120127
Antimony	7440360
Antimony trioxide	1309644
Aramite	140578
Arsenic	7440382
Arsenic compounds (inorganic)	1016
Arsenic compounds (other than inorganic)	1017
Arsine	7784421
Asbestos	1332214
Aspirin	50782
Auramine	492808
Azaserine	115026
Azathioprine	446866
Azobenzene	103333
Barium	7440393

CAS	Substance
75092	Methylene chloride {Dichloromethane}
75150	Carbon disulfide
75218	Ethylene oxide
75252	Bromoform
75274	Bromodichloromethane
75343	1,1-Dichloroethane
75354	Vinylidene chloride
75376	1,1-Difluoroethane {Freon 152a}
75434	Dichlorofluoromethane {Freon 21}
75445	Phosgene
75456	Chlorodifluoromethane {Freon 22}
75467	Trifluoromethane {Freon 23}
75558	2-Methylaziridine
75569	Propylene oxide
75650	tert-Butyl alcohol
75694	Trichlorofluoromethane {Freon 11}
75718	Dichlorodifluoromethene (Freon 12)
75730	Carbon tetrafluoride
75865	2-Methyllactonitrile
76062	Chloropicrin
76131	Chlorinated Fluorocarbon {CFC-113} {1,1,2-Trichloro-1,2,2-trifluoroethane}
76437	Fluoxymesterone
77474	Hexachlorocyclopentadiene
77781	Dimethyl sulfate
78308	Triorthocresyl phosphate
78400	Triethyl phosphine
78591	Isophorone
78795	Isoprene, except from vegetative emission sources
78842	Isobutyraldehyde
78886	2,3-Dichloropropene
78922	sec-Butyl alcohol
78933	MEK
78933	Methyl ethyl ketone
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
79061	Acrylamide
79107	Acrylic acid
79118	Chloroacetic acid
79210	Peracetic acid
79345	1,1,2,2-Tetrachloroethane
79469	2-Nitropropane
79572	Oxytetracycline
80057	4,4'-Isopropylidenediphenol
80159	Cumene hydroperoxide
80626	Methyl methacrylate
81072	Saccharin
81812	Warfarin
81889	D and C Red No. 19
82280	1-Amino-2-methylanthraquinone
82688	Pentachloronitrobenzene {Quintobenzene}
83329	Acenaphthene
84173	Dienestrol
84662	Diethyl phthalate
84742	Dibutyl phthalate
85018	Phenanthrene
85101	Particulate Matter 1
85449	Phthalic anhydride
85687	Butyl benzyl phthalate

Substance	CAS
Barium chromate	10294403
Benz[a]anthracene	56553
Benzal chloride	98873
Benzamide	55210
Benzene	71432
Benzidine (and its salts)	92875
Benzidine-based dyes	1020
Benzo[a]pyrene	50328
Benzo[b]fluoranthene	205992
Benzo[e]pyrene	192972
Benzo[g,h,i]perylene	191242
Benzo[j]fluoranthene	205823
Benzo[k]fluoranthene	207089
Benzofuran	271896
Benzoic trichloride	98077
Benzoyl chloride	98884
Benzoyl peroxide	94360
Benzphetamine hydrochloride	5411223
Benzyl chloride	100447
Benzyl violet 4B	1694093
Beryllium	7440417
beta-Butyrolactone	3068880
beta-Hexachlorocyclohexane	319857
Betel quid with tobacco	1025
Biphenyl	92524
Bis(2-chloro-1-methylethyl) ether	108601
Bis(2-chloroethyl) ether {DCEE}	111444
Bis(2-ethylhexyl) adipate	103231
Bis(chloromethyl) ether	542881
Bischloroethyl nitrosourea	154938
Bitumens, extracts of steam-refined and air-refined bitumens	1030
Bleomycins	1035
Bromine	7726956
Bromine Pentafluoride	7789302
Bromodichloromethane	75274
Bromoform	75252
Bromoxynil	1689845
Butyl acrylate	141322
Butyl benzyl phthalate	85687
Butylated hydroxyanisole {BHA}	25013165
Butyraldehyde	123728
C. I. Acid Green 3	4680788
C. I. Basic Green 4	569642
C. I. Basic Red 1	989388
C. I. Basic Red 9 monohydrochloride	569619
C. I. Disperse Yellow 3	2832408
Cadmium	7440439
Calcium chromate	13765190
Calcium cyanamide	156627
Caprolactam	105602
Carbaryl	63252
Carbon black extract	1050
Carbon disulfide	75150
Carbon monoxide	630080
Carbon Monoxide [Criteria Pollutant]	42101
Carbon tetrachloride	56235
Carbon tetrafluoride	75730
Carbonyl sulfide	463581

CAS	Substance
86306	N-Nitrosodiphenylamine
86737	Fluorene
87296	Cinnamyl anthranilate
87627	2,6-Xylidene
87683	Hexachlorobutadiene
87865	Pentachlorophenol
88062	2,4,6-Trichlorophenol
88101	Particulate Matter 2.5 Microns or less
88755	2-Nitrophenol
88857	Dinoseb
88891	Picric acid
90437	2-Phenylphenol
90948	Michler's ketone
91087	Toluene-2,6-diisocyanate
91203	Naphthalene
91225	Quinoline
91576	2-Methyl naphthalene
91598	2-Naphthylamine
91941	3,3'-Dichlorobenzidine
92524	Biphenyl
92875	Benzidine (and its salts)
92933	4-Nitrobiphenyl
94360	Benzoyl peroxide
94586	Dihydrosafrole
94597	Safrole
94757	Dichlorophenoxyacetic acid, salts and esters {2,4-D}
94780	Phenazopyridine hydrochloride
95067	Sulfallate
95476	o-Xylene
95487	o-Cresol
95501	1,2-Dichlorobenzene
95578	2-CHLOROPHENOL
95636	1,2,4-Trimethylbenze
95692	p-Chloro-o-toluidine
95807	2,4-Diaminotoluene
95830	4-Chloro-o-phenylenediamine
95954	2,4,5-Trichlorophenol
96093	Styrene oxide
96128	1,2-Dibromo-3-chloropropane
96139	2,3-Dibromo-1-propanol
96184	1,2,3-Trichloropropane
96333	Methyl acrylate
96457	Ethylene thiourea
97563	o-Aminoazotoluene
98077	Benzoic trichloride
98828	Cumene
98862	Acetophenone
98873	Benzal chloride
98884	Benzoyl chloride
98953	Nitrobenzene
99592	5-Nitro-o-anisidine
99650	m-Dinitrobenzene
99661	Valproate
100027	4-Nitrophenol
100210	Terephthalic acid
100254	p-Dinitrobenzene
100403	4-Vinylcyclohexene
100414	Ethyl benzene

Substance	CAS
Carboplatin	41575944
Carrageenan (degraded)	1055
Catechol	120809
Ceramic fibers (man-made)	1056
Chenodiol	474259
Chloramben	133904
Chlorambucil	305033
Chloramphenicol	56757
Chlorcyclizine hydrochloride	1620219
Chlordecone {Kepone}	143500
Chlordimeform	6164983
Chlorendic acid	115286
Chlorinated Fluorocarbon {CFC-113} {1,1,2-Trichloro-1,2,2-trifluoroethane}	76131
Chlorinated paraffin	1.08E+08
Chlorine	7782505
Chlorine dioxide	10049044
Chloroacetic acid	79118
Chlorobenzene	108907
Chlorobenzenes	1058
Chlorodibromomethane	124481
Chlorodifluoromethane {Freon 22}	75456
Chloroform	67663
Chlorophenols	1060
Chlorophenoxy herbicides	1065
Chloropicrin	76062
Chloroprene	126998
Chlorothalonil	1897456
Chromium	7440473
Chromium trioxide	1333820
Chromium, hexavalent	18540299
Chrysene	218019
Cinnamyl anthranilate	87296
Cisplatin	15663271
Citrus Red No. 2	6358538
Clomiphene citrate	50419
Coal tars	8007452
Cobalt	7440484
Conjugated estrogens	1068
Copper	7440508
Creosotes	1070
Cresols (mixtures of) {Cresylic acid}	1319773
Crotonaldehyde	4170303
Cumene	98828
Cumene hydroperoxide	80159
Cupferron	135206
Cyanazine	21725462
Cyanide compounds	1073
CYANIDE COMPOUNDS [Inorganic)	57125
Cycasin	14901087
Cyclohexane	110827
Cyclohexanol	108930
Cycloheximide	66819
Cyclophosphamide	50180
Cyhexatin	13121705
Cytarabine	147944
D and C Orange No. 1	3468631
D and C Red No. 19	81889
D and C Red No. 8	2092560

CAS	Substance
100425	Styrene
100447	Benzyl chloride
100754	N-Nitrosopiperidine
101020	Triphenyl phosphite
101144	4,4'-Methylene bis(2 Chloroaniline) (MOCA)
101611	4,4'-Methylene bis (N,N-dimethyl) benzenamine
101688	Methylene diphenyl diisocyanate {MDI}
101779	4,4'-Methylenedianiline
101804	4,4'-Diaminodiphenyl ether
101906	Diglycidyl resorcinol ether {DGRE}
103231	Bis(2-ethylhexyl) adipate
103333	Azobenzene
104949	p-Anisidine
105602	Caprolactam
105679	2,4-Dimethylphenol {2,4-Xylenol}
106423	p-Xylene
106445	p-Cresol
106467	p-Dichlorobenzene
106478	p-Chloroaniline
106490	p-Toluidine
106503	p-Phenylenediamine
106514	Quinone
106876	4-Vinyl-1-cyclohexene diepoxide
106887	1,2-Epoxybutane
106898	Epichlorohydrin
106934	Ethylene dibromide {EDB}
106990	1,3-Butadiene
107028	Acrolein
107051	Allyl chloride
107062	Ethylene dichloride {EDC}
107131	Acrylonitrile
107186	Allyl alcohol
107211	Ethylene glycol
107982	PGME
107982	Propylene glycol monomethyl ether
108054	Vinyl acetate
108101	Methyl isobutyl ketone {Hexone}
108101	MIK
108316	Maleic anhydride
108383	m-Xylene
108394	m-Cresol
108601	Bis(2-chloro-1-methylethyl) ether
108656	PGME Acetate
108656	Propylene glycol monomethyl ether acetate
108883	Toluene
108907	Chlorobenzene
108930	Cyclohexanol
108952	Phenol
109068	2-Methylpyridine
109864	Ethylene glycol monomethyl ether
110009	Furan
110496	Ethylene glycol monomethyl ether acetate
110543	Hexane
110714	Ethylene glycol dimethyl ether
110805	Ethylene glycol monoethyl ether
110827	Cyclohexane
110861	Pyridine
111159	Ethylene glycol monoethyl ether acetate

Substance	CAS
D and C Red No. 9	5160021
Dacarbazine	4342034
Daminozide	1596845
Danazol	17230885
Daunomycin	20830813
Daunorubicin hydrochloride	23541506
DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane}	50293
Decabromodiphenyl oxide	1163195
Di(2-ethylhexyl) phthalate	117817
Dialkylnitrosamines	1075
Diallate	2303164
Diaminotoluenes (mixed isomers)	1078
Diazomethane	334883
Dibenz[a,h]acridine	226368
Dibenz[a,h]anthracene	53703
Dibenz[a,j]acridine	224420
Dibenzo[a,e]pyrene	192654
Dibenzo[a,h]pyrene	189640
Dibenzo[a,i]pyrene	189559
Dibenzo[a,l]pyrene	191300
Dibenzofuran	132649
Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]	1080
Dibutyl phthalate	84742
Dichlorobenzenes (mixed isomers)	25321226
Dichlorodifluoromethene (Freon 12)	75718
Dichlorodiphenyldichloroethane {DDD}	72548
Dichlorofluoromethane {Freon 21}	75434
Dichlorophenoxyacetic acid, salts and esters {2,4-D}	94757
Dicofol	115322
Dieldrin	60571
Dienestrol	84173
Diepoxybutane	1464535
Diesel engine exhaust, particulate matter (Diesel PM)	9901
Diesel engine exhaust, total organic gas	9902
Diethanolamine	111422
Diethyl phthalate	84662
Diethyl sulfate	64675
Diethylene glycol	111466
Diethylene glycol dimethyl ether	111966
Diethylene glycol monobutyl ether	112345
Diethylene glycol monoethyl ether	111900
Diethylene glycol monomethyl ether	111773
Diethylstilbestrol	56531
Diglycidyl resorcinol ether {DGRE}	101906
Dihydrosafrole	94586
Dimethyl formamide	68122
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dimethylamine	124403
Dimethylvinylchloride {DMVC}	513371
Dinitrobenzenes (mixitures of)	25154545
Dinitrotoluenes (mixed isomers)	25321146
Dinocap	39300453
Dinoseb	88857
Dioxins, total, w/o individ. isomers reported {PCDDs} [Treat as 2378TCDD for HRA	1086
Dioxins, total, with individ. isomers also reported {PCDDs}	1085
Diphenylhydantoin	630933
Dipropylene glycol	25265718

CAS	Substance
111308	Glutaraldehyde
111422	Diethanolamine
111444	Bis(2-chloroethyl) ether {DCEE}
111466	Diethylene glycol
111762	EGBE
111762	Ethylene glycol monobutyl ether
111773	Diethylene glycol monomethyl ether
111900	Diethylene glycol monoethyl ether
111966	Diethylene glycol dimethyl ether
112345	Diethylene glycol monobutyl ether
112492	Triethylene glycol dimethyl ether
114261	Propoxur
115026	Azaserine
115071	Propylene
115286	Chlorendic acid
115322	Dicofol
115673	Paramethadione
115866	Triphenyl phosphate
117793	2-Aminoanthraquinone
117817	Di(2-ethylhexyl) phthalate
117840	n-Dioctyl phthalate
118741	Hexachlorobenzene
119904	3,3'-Dimethoxybenzidine
119937	3,3'-Dimethylbenzidine {o-Tolidine}
120127	Anthracene
120581	Isosafrole
120718	p-Cresidine
120809	Catechol
120821	1,2,4-Trichlorobenze
120832	2,4-Dichlorophenol
121142	2,4-Dinitrotoluene
121448	Triethylamine
121697	N,N-Dimethylaniline
122601	Phenyl glycidyl ether
123319	Hydroquinone
123386	Propionaldehyde
123728	Butyraldehyde
123911	1,4-Dioxane
124403	Dimethylamine
124481	Chlorodibromomethane
125848	Aminoglutethimide
126078	Griseofulvin
126727	Tris(2,3-dibromopropyl)phosphate
126738	Tributyl phosphate
126998	Chloroprene
127184	Perchloroethylene {Tetrachloroethene}
127480	Trimethadione
128449	Sodium saccharin
129000	Pyrene
129157	2-Methyl-1-nitroanthraquinone (uncertain purity)
131113	Dimethyl phthalate
132274	Sodium o-phenylphenate
132649	Dibenzofuran
133073	Folpet
133904	Chloramben
134292	o-Anisidine hydrochloride
134327	1-Naphthylamine
135206	Cupferron

Substance	CAS
Dipropylene glycol monomethyl ether	34590948
Direct Black 38	1937377
Direct Blue 6	2602462
Direct Brown 95 (technical grade)	16071866
Disperse Blue 1	2475458
Doxycycline	564250
EGBE	111762
Environmental Tobacco Smoke	1090
Epichlorohydrin	106898
Epoxy resins	1091
Ergotamine tartrate	379793
Erionite	12510428
Estradiol 17 beta	50282
Estrogens, non-steroidal	1095
Estrogens, steroidal	1100
Estrone	53167
Ethinyl estradiol	57636
Ethyl acrylate	140885
Ethyl benzene	100414
Ethyl chloride {Chlorethane)	75003
Ethyl chloroformate	541413
Ethyl methanesulfonate	62500
Ethylene	74851
Ethylene dibromide {EDB}	106934
Ethylene dichloride {EDC}	107062
Ethylene glycol	107211
Ethylene glycol diethyl ether	629141
Ethylene glycol dimethyl ether	110714
Ethylene glycol monobutyl ether	111762
Ethylene glycol monoethyl ether	110805
Ethylene glycol monoethyl ether acetate	111159
Ethylene glycol monomethyl ether	109864
Ethylene glycol monomethyl ether acetate	110496
Ethylene glycol monopropyl ether	2807309
Ethylene oxide	75218
Ethylene thiourea	96457
Etoposide	33419420
Etretinate	54350480
Fluometuron	2164172
Fluoranthene	206440
Fluorene	86737
Fluorides	1101
Fluorocarbons (brominated)	1103
Fluorocarbons (chlorinated)	1104
Fluorouracil	51218
Fluoxymesterone	76437
Flutamide	13311847
Folpet	133073
Formaldehyde	50000
Furan	110009
Furazolidone	67458
Furmecyclox	60568050
Gasoline engine exhaust, particulate matter	9910
Gasoline engine exhaust, total organic gas	9911
Gasoline vapors	1110
Glasswool (man-made fibers)	1111
Glu-P-1 {2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole}	67730114
Glu-P-2 {2-Aminodipyrido[1,2-a:3',2'-d]imidazole}	67730103

CAS	Substance
139651	4,4'-Thiodianiline
139913	5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)amino]-2-oxazolidinone
140578	Aramite
140885	Ethyl acrylate
141322	Butyl acrylate
143500	Chlordecone {Kepone}
143679	Vinblastine sulfate
147944	Cytarabine
148823	Melphalan
154427	Thioguanine
154938	Bischloroethyl nitrosourea
156105	p-Nitrosodiphenylamine
156627	Calcium cyanamide
189559	Dibenzo[a,i]pyrene
189640	Dibenzo[a,h]pyrene
191242	Benzo[g,h,i]perylene
191300	Dibenzo[a,l]pyrene
192654	Dibenzo[a,e]pyrene
192972	Benzo[e]pyrene
193395	Indeno[1,2,3-cd]pyrene
194592	7H-Dibenzo[c,g]carbazole
198550	Perylene
205823	Benzo[j]fluoranthene
205992	Benzo[b]fluoranthene
206440	Fluoranthene
207089	Benzo[k]fluoranthene
208968	Acenaphthylene
218019	Chrysene
224420	Dibenz[a,j]acridine
226368	Dibenz[a,h]acridine
271896	Benzofuran
299752	Treosulfan
301042	Lead acetate
302012	Hydrazine
302705	Nitrogen mustard N-oxide
302794	all-trans-Retinoic acid
303344	Lasiocarpine
303479	Ochratoxin A
305033	Chlorambucil
309002	Aldrin
315220	Monocrotaline
315377	Testosterone enanthate
319846	alpha-Hexachlorocyclohexane
319857	beta-Hexachlorocyclohexane
334883	Diazomethane
366701	Procarbazine hydrochloride
373024	Nickel acetate
379793	Ergotamine tartrate
434071	Oxymetholone
443481	Metronidazole
446866	Azathioprine
463581	Carbonyl sulfide
474259	Chenodiol
484208	5-Methoxypsoralen
492808	Auramine
494031	N-N-Bis(2-chloroethyl)-2-naphthylamine {Chlornaphazine}
505602	Mustard gas
509148	Tetranitromethane

Substance	CAS
Glutaraldehyde	111308
Glycidaldehyde	765344
Glycidol	556525
Glycol ethers (and their acetates)	1115
Griseofulvin	126078
Gyromitrin	16568028
Halazepam	23092173
HC Blue 1	2784943
Heptachlor epoxide	1024573
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachlorocyclohexanes (mixed or technical grade)	608731
Hexachlorocyclopentadiene	77474
Hexachloronaphthalene	1335871
Hexamethylene-1,6-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydrazine sulfate	10034932
Hydrochloric acid	7647010
Hydrocyanic acid	74908
Hydrogen bromide	10035106
Hydrogen fluoride	7664393
Hydrogen Selenide	7783075
Hydrogen sulfide	7783064
Hydroquinone	123319
Ifosfamide	3778732
Indeno[1,2,3-cd]pyrene	193395
Iodine-131	24267569
IQ {2-Amino-3-methylimidazo[4,5-f]quinoline}	76180966
Iron dextran complex	9004664
Iron pentacarbonyl	13463406
Isobutyraldehyde	78842
Isocyanates	1125
Isophorone	78591
Isoprene, except from vegetative emission sources	78795
Isopropyl alcohol	67630
Isosafrole	120581
Isotretinoin	4759482
Lactofen	77501634
Lasiocarpine	303344
Lead	7439921
Lead acetate	301042
Lead chromate	7758976
Lead compounds (inorganic)	1128
Lead compounds (other than inorganic)	1129
Lead phosphate	7446277
Lead subacetate	1335326
Lindane {gamma-Hexachlorocyclohexane}	58899
Lithium carbonate	554132
Lithium citrate	919164
Lorazepam	846491
Lubricant base oils	1131
Maleic anhydride	108316
Mancozeb	8018017
Maneb	12427382
Manganese	7439965
m-Cresol	108394

CAS	Substance
512561	Trimethyl phosphate
513371	Dimethylvinylchloride {DMVC}
528290	o-Dinitrobenzene
531760	Merphalan
531828	N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide
532274	2-Chloroacetophenone
534521	4,6-Dinitro-o-cresol
540590	1,2-Dichloroethylene
540738	1,2-Dimethylhydrazine
540841	2,2,4-Trimethylpentane
540885	t-Butyl acetate
541413	Ethyl chloroformate
541731	1,3-Dichlorobenzene
542881	Bis(chloromethyl) ether
546883	Acetohydroxamic acid
554132	Lithium carbonate
555840	1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone
556525	Glycidol
563473	3-Chloro-2-methylpropene
564250	Doxycycline
569619	C. I. Basic Red 9 monohydrochloride
569642	C. I. Basic Green 4
584849	Toluene-2,4-diisocyanate
590965	Methylazoxymethanol
592621	Methylazoxymethanol acetate
593602	Vinyl bromide
593748	Methyl mercury
595335	Megestrol acetate
602879	5-Nitroacenaphthene
606202	2,6-Dinitrotoluene
607578	2-Nitrofluorene
608731	Hexachlorocyclohexanes (mixed or technical grade)
613354	N,N'-Diacetylbenzidine
615054	2,4-Diaminoanisole
615532	N-Nitroso-N-methylurethane
621647	N-Nitrosodi-n-propylamine
624839	Methyl isocyanate
629141	Ethylene glycol diethyl ether
630080	Carbon monoxide
630933	Diphenylhydantoin
636215	o-Toluidine hydrochloride
680319	Hexamethylphosphoramide
712685	2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole
759739	N-Nitroso-N-ethylurea
764410	1,4-Dichloro-2-butene
765344	Glycidaldehyde
794934	Panfuran S
811972	1,1,1,2-Tetrafluoroethane {HFC-134a}
822060	Hexamethylene-1,6-diisocyanate
838880	4,4'-Methylene bis(2-methylaniline)
846491	Lorazepam
846504	Temazepam
919164	Lithium citrate
924163	N-Nitrosodi-n-butylamine
924425	N-Methyloacrylamide
930552	N-Nitrosopyrrolidine
961115	Tetrachlorvinphos
989388	C. I. Basic Red 1

Substance	CAS
m-Dinitrobenzene	99650
Medroxyprogesterone	71589
Megestrol acetate	595335
MEK	78933
Melphalan	148823
Menotropins	9002680
Mercaptopurine	6112761
Mercuric chloride	7487947
Mercury	7439976
Merphalan	531760
Mestranol	72333
Methacycline hydrochloride	3963959
Methane	74828
Methanol	67561
Methimazole	60560
Methotrexate	59052
Methotrexate sodium	15475566
Methoxychlor	72435
Methyl acrylate	96333
Methyl bromide {Bromomethane}	74839
Methyl chloride {Chloromethane}	74873
Methyl chloroform {1,1,1-Trichloroethane}	71556
Methyl ethyl ketone	78933
Methyl hydrazine	60344
Methyl iodide {Iodomethane}	74884
Methyl isobutyl ketone {Hexone}	108101
Methyl isocyanate	624839
Methyl mercury	593748
Methyl methacrylate	80626
Methyl methanesulfon	66273
Methyl tert-butyl ether	1634044
Methylazoxymethanol	590965
Methylazoxymethanol acetate	592621
Methylene bromide	74953
Methylene chloride {Dichloromethane}	75092
Methylene diphenyl diisocyanate {MDI}	101688
Methyltestosterone	58184
Methylthiouracil	56042
Metiram	9006422
Metronidazole	443481
Michler's ketone	90948
Midazolam hydrochloride	59467968
MIK	108101
Mineral fibers (fine: man-made)	1136
Mineral fibers (other than man-made)	1135
Mineral oils (untreated and mildly treated oils)	1140
Mirex	2385855
Misoprostol	62015398
Mitomycin C	50077
Mitoxantrone hydrochloride	70476823
Molybdenum trioxide	1313275
Monocrotaline	315220
Mustard gas	505602
m-Xylene	108383
N,N'-Diacetylbenzidine	613354
N,N-Dimethylaniline	121697
N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide	531828
Nafarelin acetate	86220420

CAS	Substance
1024573	Heptachlor epoxide
1120714	1,3-Propane sultone
1163195	Decabromodiphenyl oxide
1271289	Nickelocene
1309644	Antimony trioxide
1310732	Sodium hydroxide
1313275	Molybdenum trioxide
1313991	Nickel oxide
1314132	Zinc oxide
1314201	Thorium dioxide
1314563	Phosphorus pentoxide
1314621	VANADIUM PENTOXIDE
1319773	Cresols (mixtures of) {Cresylic acid}
1330207	Xylene
1332214	Asbestos
1333820	Chromium trioxide
1335326	Lead subacetate
1335871	Hexachloronaphthalene
1336363	PCBs {Polychlorinated biphenyls}
1344281	Aluminum oxide (fibrous)
1405103	Neomycin sulfate
1464535	Diepoxybutane
1582098	Trifluralin
1596845	Daminozide
1615801	1,2-Diethylhydrazine
1620219	Chlorcyclizine hydrochloride
1634044	Methyl tert-butyl ether
1689845	Bromoxynil
1694093	Benzyl violet 4B
1746016	2,3,7,8-Tetrachlorodibenzo-P-Dioxin
1836755	Nitrofen (technical grade)
1897456	Chlorothalonil
1937377	Direct Black 38
2068782	Vincristine sulfate
2092560	D and C Red No. 8
2164172	Fluometuron
2234131	Octachloronaphthalene
2303164	Diallate
2385855	Mirex
2475458	Disperse Blue 1
2551624	Sulfur Hexafluoride
2602462	Direct Blue 6
2646175	Oil Orange SS
2784943	HC Blue 1
2795393	Perfluorooctanoic acid {PFOA} (and its salts, esters, and sulfonates)
2807309	Ethylene glycol monopropyl ether
2832408	C. I. Disperse Yellow 3
3068880	beta-Butyrolactone
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin
3333673	Nickel carbonate
3468631	D and C Orange No. 1
3546109	Phenesterin
3564098	Ponceau 3R
3570750	2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole
3688537	AF-2
3697243	5-Methylchrysene
3761533	Ponceau MX
3771195	Nafenopin

Substance	CAS
Nafenopin	3771195
Naphthalene	91203
n-Butyl alcohol	71363
n-Dioctyl phthalate	117840
Neomycin sulfate	1405103
Netilmicin sulfate	56391572
Nickel	7440020
Nickel acetate	373024
Nickel carbonate	3333673
Nickel carbonyl	13463393
Nickel hydroxide	12054487
Nickel oxide	1313991
Nickel refinery dust	1146
Nickel subsulfide	12035722
Nickelocene	1271289
Nicotine	54115
Niridazole	61574
Nitric acid	7697372
Nitrilotriacetic acid (salts)	1148
Nitrilotriacetic acid, trisodium salt monohydrate	18662538
Nitrobenzene	98953
Nitrofen (technical grade)	1836755
Nitrofurantoin	67209
Nitrofurazone	59870
Nitrogen Dioxide	10102440
Nitrogen mustard	51752
Nitrogen mustard hydrochloride	55867
Nitrogen mustard N-oxide	302705
Nitroglycerin	55630
Nitrous oxide	10024972
N-Methyl-N'-nitro-N-nitrosoguanidine	70257
N-Methyloacrylamide	924425
N-N-Bis(2-chloroethyl)-2-naphthylamine {Chlornaphazine}	494031
N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
N-Nitrosodi-n-butylamine	924163
N-Nitrosodi-n-propylamine	621647
N-Nitrosodiphenylamine	86306
N-Nitrosomethylethylamine	10595956
N-Nitrosomethylvinylamine	4549400
N-Nitrosomorpholine	59892
N-Nitroso-N-ethylurea	759739
N-Nitroso-N-methylurethane	615532
N-Nitrosonornicotine	16543558
N-Nitrosopiperidine	100754
N-Nitrosopyrrolidine	930552
N-Nitrososarcosine	13256229
Norethisterone	68224
Norgestrel	6533002
o-Aminoazotoluene	97563
o-Anisidine hydrochloride	134292
Ochratoxin A	303479
o-Cresol	95487
Octachloronaphthalene	2234131
o-Dinitrobenzene	528290
Oil Orange SS	2646175
OLEUM	8014957
Osmium tetroxide	20816120

CAS	Substance
3778732	Ifosfamide
3810740	Streptomycin sulfate
3963959	Methacycline hydrochloride
4170303	Crotonaldehyde
4342034	Dacarbazine
4549400	N-Nitrosomethylvinylamine
4680788	C. I. Acid Green 3
4759482	Isotretinoin
5160021	D and C Red No. 9
5216251	p-alpha,alpha,alpha-Tetrachlorotoluene
5411223	Benzphetamine hydrochloride
5522430	1-Nitropyrene
6109973	3-Amino-9-ethylcarbazole hydrochloride
6112761	Mercaptopurine
6164983	Chlordimeform
6358538	Citrus Red No. 2
6484522	Ammonium nitrate
6533002	Norgestrel
7429905	Aluminum
7439921	Lead
7439965	Manganese
7439976	Mercury
7440020	Nickel
7440224	Silver
7440280	Thallium
7440360	Antimony
7440382	Arsenic
7440393	Barium
7440417	Beryllium
7440439	Cadmium
7440473	Chromium
7440484	Cobalt
7440508	Copper
7440622	Vanadium (fume or dust)
7440666	Zinc
7446095	Sulfur Dioxide
7446277	Lead phosphate
7446346	Selenium sulfide
7446719	Sulfur Trioxide
7487947	Mercuric chloride
7496028	6-Nitrochrysene
7550450	Titanium tetrachloride
7631869	Silica, crystalline
7647010	Hydrochloric acid
7664382	Phosphoric acid
7664393	Hydrogen fluoride
7664417	Ammonia
7664939	Sulfuric acid
7697372	Nitric acid
7719122	Phosphorus trichloride
7723140	Phosphorus
7726956	Bromine
7758012	Potassium bromate
7758976	Lead chromate
7782492	Selenium
7782505	Chlorine
7783064	Hydrogen sulfide
7783075	Hydrogen Selenide

Substance	CAS
o-Toluidine hydrochloride	636215
Oxides of Nitrogen	42603
Oxides of sulfur	42401
o-Xylene	95476
Oxymetholone	434071
Oxytetracycline	79572
Ozone	10028156
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	1151
PAHs, total, with individ. components also reported	1150
p-alpha,alpha,alpha-Tetrachlorotoluene	5216251
p-Aminoazobenzene	60093
Panfuran S	794934
p-Anisidine	104949
Paramethadione	115673
Parathion	56382
Particulate Matter	11101
Particulate Matter 1	85101
Particulate Matter 2.5 Microns or less	88101
PCBs {Polychlorinated biphenyls}	1336363
p-Chloroaniline	106478
p-Chloro-o-toluidine	1059
p-Chloro-o-toluidine	95692
p-Cresidine	120718
p-Cresol	106445
p-Dichlorobenzene	106467
p-Dinitrobenzene	100254
Penicillamine	52675
Pentachloronitrobenzene {Quintobenzene}	82688
Pentachlorophenol	87865
Pentobarbital sodium	57330
Peracetic acid	79210
Perchloroethylene {Tetrachloroethene}	127184
Perfluorooctanoic acid {PFOA} (and its salts, esters, and sulfonates)	2795393
Perylene	198550
PGME	107982
PGME Acetate	108656
Phenacemide	63989
Phenacetin	62442
Phenanthrene	85018
Phenazopyridine hydrochloride	94780
Phenesterin	3546109
Phenobarbital	50066
Phenol	108952
Phenoxybenzamine	59961
Phenoxybenzimide hydrochloride	63923
Phenyl glycidyl ether	122601
Phenytoin	57410
Phosgene	75445
Phosphine	7803512
Phosphoric acid	7664382
Phosphorus	7723140
Phosphorus oxychloride	10025873
Phosphorus pentachloride	10026138
Phosphorus pentoxide	1314563
Phosphorus trichloride	7719122
Phthalic anhydride	85449
Picric acid	88891
Pipobroman	54911

CAS	Substance
7783202	Ammonium sulfate
7784421	Arsine
7789062	Strontium chromate
7789302	Bromine Pentafluoride
7803512	Phosphine
8007452	Coal tars
8014957	OLEUM
8018017	Mancozeb
9002680	Menotropins
9004664	Iron dextran complex
9006422	Metiram
10024972	Nitrous oxide
10025873	Phosphorus oxychloride
10026138	Phosphorus pentachloride
10028156	Ozone
10034932	Hydrazine sulfate
10035106	Hydrogen bromide
10048132	Sterigmatocystin
10049044	Chlorine dioxide
10102440	Nitrogen Dioxide
10294403	Barium chromate
10588019	Sodium dichromate
10595956	N-Nitrosomethylethylamine
12035722	Nickel subsulfide
12054487	Nickel hydroxide
12122677	Zineb
12427382	Maneb
12510428	Erionite
13010474	1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU}
13121705	Cyhexatin
13256229	N-Nitrososarcosine
13311847	Flutamide
13463393	Nickel carbonyl
13463406	Iron pentacarbonyl
13647353	Trilostane
13765190	Calcium chromate
13909096	1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea {Methyl CCNU}
14901087	Cycasin
15475566	Methotrexate sodium
15663271	Cisplatin
15972608	Alachlor
16071866	Direct Brown 95 (technical grade)
16543558	N-Nitrosonornicotine
16568028	Gyromitrin
17230885	Danazol
18378897	Plicamycin
18540299	Chromium, hexavalent
18662538	Nitrilotriacetic acid, trisodium salt monohydrate
18883664	Streptozotocin
19408743	1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin
20325400	3,3'-Dimethoxybenzidine dihydrochloride
20816120	Osmium tetroxide
20830813	Daunomycin
21725462	Cyanazine
23092173	Halazepam
23214928	Adriamycin
23541506	Daunorubicin hydrochloride
24267569	Iodine-131

Substance	CAS
Plicamycin	18378897
p-Nitrosodiphenylamine	156105
Polybrominated biphenyls	1155
Polybrominated diphenyl ethers {PBDEs}	2222
Polygeenan	53973981
Ponceau 3R	3564098
Ponceau MX	3761533
Potassium bromate	7758012
p-Phenylenediamine	106503
Procarbazine hydrochloride	366701
Progesterone	57830
Progestins	1160
Propionaldehyde	123386
Propoxur	114261
Propylene	115071
Propylene glycol monomethyl ether	107982
Propylene glycol monomethyl ether acetate	108656
Propylene oxide	75569
Propylthiouracil	51525
p-Toluidine	106490
p-Xylene	106423
Pyrene	129000
Pyridine	110861
Quinoline	91225
Quinone	106514
Radionuclides	1165
Radon and its decay	1166
Reactive Organic Gas	16113
Retinol/retinyl este	1167
Ribavirin	36791045
Rockwool (man-made fibers)	1168
Saccharin	81072
Safrole	94597
sec-Butyl alcohol	78922
Selenium	7782492
Selenium sulfide	7446346
Shale oils	1180
Silica, crystalline	1175
Silica, crystalline	7631869
Silver	7440224
Slagwool (man-made fibers)	1181
Sodium dichromate	10588019
Sodium hydroxide	1310732
Sodium o-phenylphenate	132274
Sodium saccharin	128449
Soots	1185
Sterigmatocystin	10048132
Streptomycin sulfate	3810740
Streptozotocin	18883664
Strontium chromate	7789062
Styrene	100425
Styrene oxide	96093
Sulfallate	95067
Sulfates	9960
Sulfur Dioxide	7446095
Sulfur Hexafluoride	2551624
Sulfur Trioxide	7446719
Sulfuric acid	7664939

CAS	Substance
25013165	Butylated hydroxyanisole {BHA}
25154545	Dinitrobenzenes (mixitures of)
25167833	TETRACHLOROPHENOLS
25265718	Dipropylene glycol
25321146	Dinitrotoluenes (mixed isomers)
25321226	Dichlorobenzenes (mixed isomers)
25551137	TRIMETHYLBENZENES
26148685	A-alpha-C {2-Amino-9H-pyrido[2,3-b]indole}
26471625	TOLUENE DIISOCYANATE
26995915	Urofollitropin
28434868	3,3'-Dichloro-4,4'-diaminodiphenyl ether
28911015	Triazolam
28981977	Alprazolam
30402154	Total Pentachlorodibenzofuran
31508006	2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)
32598133	3,3',4,4'-TETRACHLORBIPHENYL (PCB77)
32598144	2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}
32774166	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)
33419420	Etoposide
34256821	Acetochlor
34465468	Total Hexachlorodibenzo-p-dioxin
34590948	Dipropylene glycol monomethyl ether
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin
36088229	Total Pentachlorodibenzo-p-dioxin
36791045	Ribavirin
37871004	Total Heptachlorodibenzo-p-dioxin
38380084	2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)
38998753	Total Heptachlorodibenzofuran
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran
39156417	2,4-Diaminoanisole sulfate
39227286	1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin
39300453	Dinocap
39635319	2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)
39831555	Amikacin sulfate
40321764	1,2,3,7,8-Pentachlorodibenzo-P-dioxin
41575944	Carboplatin
41903575	Total Tetrachlorodibenzo-p-dioxin
42397648	1,6-Dinitropyrene
42397659	1,8-Dinitropyrene
49842071	Tobramycin sulfate
51207319	2,3,7,8-Tetrachlorodibenzofuran
52663726	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)
53973981	Polygeenan
54350480	Etretinate
54965241	Tamoxifen citrate
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran
55684941	Total Hexachlorodibenzofuran
55722275	Total Tetrachlorodibenzofuran
55738540	trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl-1,3,4-oxadiazol
56391572	Netilmicin sulfate
57117314	2,3,4,7,8-Pentachlorodibenzofuran
57117416	1,2,3,7,8-Pentachlorodibenzofuran
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran
57465288	3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)
57653857	1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin
57835924	4-Nitropyrene
59467968	Midazolam hydrochloride
60153493	3-(N-Nitrosomethylamino)propionitrile

Substance	CAS
SULFURIC ACID+OLEUM	9961
t-Butyl acetate	540885
Talc containing asbestiform fibers	1190
Tamoxifen citrate	54965241
Temazepam	846504
Terephthalic acid	100210
tert-Butyl alcohol	75650
Testosterone and its esters	58220
Testosterone enanthate	315377
TETRACHLOROPHENOLS	25167833
Tetrachlorvinphos	961115
Tetracycline hydrochoride	64755
Tetranitromethane	509148
Thalidomide	50351
Thallium	7440280
Thioacetamide	62555
Thioguanine	154427
Thorium dioxide	1314201
Titanium tetrachloride	7550450
Tobacco products, smokeless	1200
Tobramycin sulfate	49842071
Toluene	108883
TOLUENE DIISOCYANATE	26471625
Toluene-2,4-diisocyanate	584849
Toluene-2,6-diisocyanate	91087
Total Heptachlorodibenzofuran	38998753
Total Heptachlorodibenzo-p-dioxin	37871004
Total Hexachlorodibenzofuran	55684941
Total Hexachlorodibenzo-p-dioxin	34465468
Total Organic Gases	43101
Total Pentachlorodibenzofuran	30402154
Total Pentachlorodibenzo-p-dioxin	36088229
Total Tetrachlorodibenzofuran	55722275
Total Tetrachlorodibenzo-p-dioxin	41903575
trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl-1,3,4-oxadiazol	55738540
Treosulfan	299752
Triazolam	28911015
Tributyl phosphate	126738
Trichlorfon	52686
Trichloroethylene	79016
Trichlorofluoromethane {Freon 11}	75694
Triethyl phosphine	78400
Triethylamine	121448
Triethylene glycol dimethyl ether	112492
Trifluoromethane {Freon 23}	75467
Trifluralin	1582098
Trilostane	13647353
Trimethadione	127480
Trimethyl phosphate	512561
TRIMETHYLBENZENES	25551137
Triorthocresyl phosphate	78308
Triphenyl phosphate	115866
Triphenyl phosphite	101020
Tris(1-aziridinyl) phosphine sulfide	52244
Tris(2,3-dibromopropyl)phosphate	126727
Tris(aziridinyl)-p-benzoquinone	68768
Trp-P-1 {3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}	62450060
Trp-P-2 {3-Amino-1-methyl-5H-pyrido[4,3-b]indole}	62450071

CAS	Substance
60568050	Furmecyclox
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran
62015398	Misoprostol
62450060	Trp-P-1 {3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}
62450071	Trp-P-2 {3-Amino-1-methyl-5H-pyrido[4,3-b]indole}
62476599	Acifluorfen
64091914	4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone {NNK}
65510443	2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran
67730103	Glu-P-2 {2-Aminodipyrido[1,2-a:3',2'-d]imidazole}
67730114	Glu-P-1 {2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole}
68006837	2-Amino-3-methyl-9H-pyrido(2,3-b) indole {MeA-alpha-C}
69782907	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)
70362504	3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)
70476823	Mitoxantrone hydrochloride
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran
74472370	2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)
76180966	IQ {2-Amino-3-methylimidazo[4,5-f]quinoline}
77501634	Lactofen
86220420	Nafarelin acetate
108171262	Chlorinated paraffin

Substance	CAS
Trypan blue	72571
Uracil mustard	66751
Urethane	51796
Urofollitropin	26995915
Valproate	99661
Vanadium (fume or dust)	7440622
VANADIUM PENTOXIDE	1314621
Vinblastine sulfate	143679
Vincristine sulfate	2068782
Vinyl acetate	108054
Vinyl bromide	593602
Vinyl chloride	75014
Vinyl fluoride	75025
Vinylidene chloride	75354
Volatile Organic Compounds (VOC)	43104
Warfarin	81812
Wood preservatives (containing arsenic and chromate)	1206
Xylene	1330207
Zinc	7440666
Zinc oxide	1314132
Zineb	12122677