

APPENDIX F

Air Quality Assessment

AIR QUALITY & GREENHOUSE GAS IMPACT ASSESSMENT

FOR

LEWISTON CSWD WASTEWATER TREATMENT PLANT PROJECT

TRINITY COUNTY, CA

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List of Common Terms & Acronyms

AAM	Annual Arithmetic Mean
AHERA	Asbestos Hazard Emergency Response Act
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DPM	Diesel-Exhaust Particulate Matter or Diesel-Exhaust PM
DRRP	Diesel Risk Reduction Plan
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutant
LCS D	Lewiston Community Services District
LPMWC	Lewiston Park Municipal Water Company
LVWC	Lewiston Valley Water Company
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NCAB	North Coast Air Basin
NCUAQMD	North Coast Unified Air Quality Management District
NO _x	Oxides of Nitrogen
O ₃	Ozone
Pb	Lead
PM	Particulate Matter
PM ₁₀	Particulate Matter (less than 10 µm)
PM _{2.5}	Particulate Matter (less than 2.5 µm)
ppb	Parts per Billion
ppm	Parts per Million
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
sq.ft.	Square Feet
TAC	Toxic Air Contaminant
TBACT	Toxic Best Available Control Technology
TOG	Total Organic Gases
TDMHP	Trinity Dam Mobile Home Park
µg/m ³	Micrograms per cubic meter
UNFCCC	United Nations Framework Convention on Climate Change
U.S. EPA	United State Environmental Protection Agency
VOC	Volatile Organic Gases
WWTP	Wastewater Treatment Plant

INTRODUCTION

This report describes the existing environment in the project vicinity and identifies potential air quality and greenhouse gas (GHG) impacts associated with the proposed Lewiston Community Services District (LCSD) Wastewater Treatment Plant (WWTP) Project (Project). Air quality and GHG impacts were evaluated based on project-specific construction and operational information. The analysis was prepared in accordance with North Coast Unified Air Quality Management District (NCUAQMD)-recommended guidance. Mitigation measures were included for potentially significant impacts. No significant and unavoidable air quality or GHG impacts were identified.

PROPOSED PROJECT OVERVIEW

In order to resolve ongoing wastewater treatment and overflow problems, and alleviate public health concerns, the LCSD proposes to consolidate, and replace or upgrade three existing sewer collection, treatment and disposal facilities—Lewiston Park Mutual Water Company (LPMWC), Trinity Dam Mobile Home Park (TDMHP), and LCSD (formerly Lewiston Valley Water Company (LVWC)). The location of the proposed project is shown in Figure 1. The project layout is depicted in Figure 2.

PROJECT LOCATION

The project is located in the eastern portion of Trinity County, near the community of Lewiston. The project area is located within the North Coast Air Basin (NCAB) and within the jurisdiction of the NCUAQMD.

NEARBY LAND USES & SENSITIVE RECEPTORS

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

The nearest sensitive receptors consist predominantly of residential land uses. The nearest residential land uses are located adjacent to various facilities, including the LPMWC WWTP,

AIR QUALITY

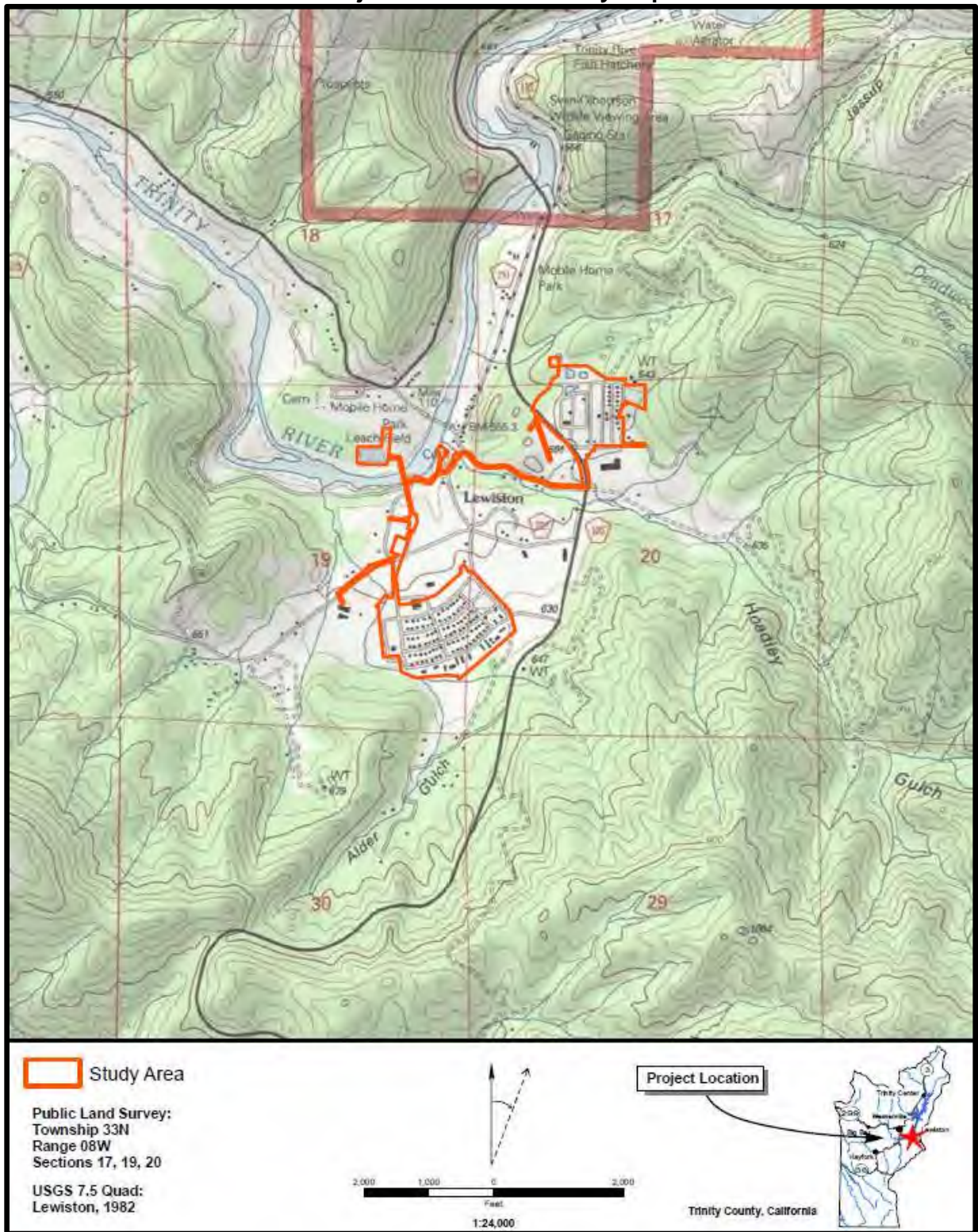
EXISTING SETTING

The NCAB includes Del Norte, Humboldt, Trinity, and Mendocino counties; as well as, the northern portion of Sonoma County. The NCUAQMD has jurisdiction over Del Norte, Humboldt, and Trinity counties.

The NCAB is bordered on the west by the Pacific Ocean and extends from the Oregon Border on the north to the Mendocino County line on the south. The basin consists of varied terrain, from coastal wetlands to rugged mountains. Inversions and diurnal offshore wind patterns are common.

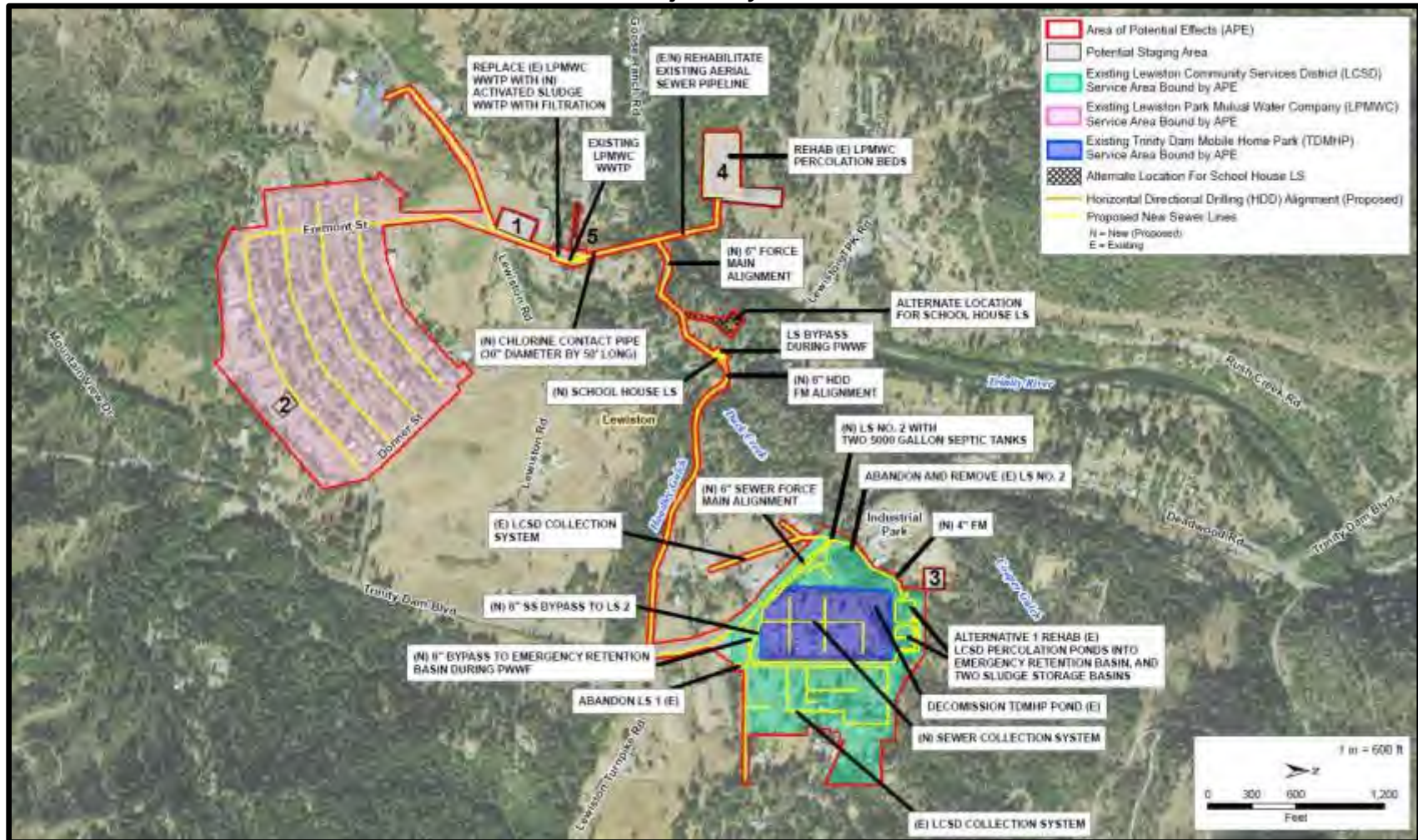
The air in Humboldt, Del Norte and Trinity County is considered to be in "in attainment" of state and federal ambient air quality standards, with the exception of Humboldt County, which is designated nonattainment for the State's 24-hour PM₁₀ standard. The two pollutants of greatest concern in the region are ozone and particulate matter. The county's sunny climate, pollution-trapping mountains and valleys, along with the growing population, all contribute to the problem.

Figure 1
Project Location & Vicinity Map



Source: NSR 2016

**Figure 2
Project Layout**



CRITERIA AIR POLLUTANTS

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas, standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

The following provides a summary discussion of the primary and secondary criteria air pollutants of primary concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere.

Ozone (O₃) is a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when oxides of nitrogen (NO_x) and volatile organic compounds (VOC), also referred to as reactive organic gases (ROG) react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a criteria pollutant. It is a major component of smog. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Reactive Organic Gas (ROG) is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment. Total Organic Gases (TOGs) includes all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and VOC are subsets of TOG.

Volatile Organic Compounds (VOC) are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and may also be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

Oxides of Nitrogen (NO_x) are a family of gaseous nitrogen compounds and is a precursor to the formation of ozone and particulate matter. The major component of NO_x, nitrogen dioxide (NO₂), is a reddish-brown gas that is toxic at high concentrations. NO_x results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause

serious health effects. U.S. EPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles (PM_{2.5-10})," such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. PM_{2.5-10} is deposited in the thoracic region of the lungs.
- "Fine particles (PM_{2.5})," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossil fuels, meat, wood and other hydrocarbons. While UFP mass is a small portion of PM_{2.5}, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass.

PM₁₀, PM_{2.5}, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, PM_{2.5} and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM₁₀ sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust.

Numerous scientific studies have linked both long- and short-term particle pollution exposure to a variety of health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and also acute (short-term) bronchitis, and may also increase susceptibility to respiratory infections. In people with heart disease, short-term exposures have been linked to heart attacks and arrhythmias. Healthy children and adults have not been reported to suffer serious effects from short term exposures, although they may experience temporary minor irritation when particle levels are elevated.

Carbon Monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). The main source of CO is on-road motor vehicles. Other CO sources include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of the local nature of CO problems, California Air Resources Board (ARB) and U.S. EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM₁₀. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled, with the introduction of new automotive emission controls and fleet turnover.

Sulfur Dioxide (SO₂) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. However, like airborne NO_x, suspended SO_x particles contribute to the poor visibility. These SO_x particles can also combine with other pollutants to form PM_{2.5}. The prevalence of low-sulfur fuel use has minimized problems from this pollutant.

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage. Lead can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically.

Hydrogen Sulfide (H₂S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high

concentrations; especially in enclosed spaces (800 ppm can cause death). OSHA regulates workplace exposure to H₂S.

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The ARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates (SO₄²⁻) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilator function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles: Are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride (C₂H₃Cl or VCM) is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

ODORS

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant

reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Odors from domestic wastewater are typically a result of anaerobic biological activity in the sewer collection and wastewater treatment systems. Odors are most prevalent during warm weather conditions, which favor a more rapid multiplication of the anaerobic bacteria. In addition, sewage containing industrial wastes may have odor problems compounded by organic gases from waste chemicals added to the sewer system. The anaerobic decomposition of compounds containing nitrogen and sulfur results in a number of gases, including hydrogen sulfide, ammonia, carbon dioxide, methane, nitrogen, oxygen and hydrogen. Although many different combinations of gases can occur at any given time, the most offensive odors associated with domestic wastewater are typically the result of emissions of hydrogen sulfide gas.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The NCUAQMD does not have an individual rule or regulation that specifically addresses odors from WWTPs.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA), and are thus not subject to National or California ambient air quality standards (NAAQS and CAAQS, respectively). Instead, the U.S. EPA and the ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with NCUAQMD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects:

Diesel Exhaust Particulate Matter (Diesel Exhaust PM or DPM) was identified as a TAC by the ARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40 percent of the statewide total, with an additional 57 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3 percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (ARB 2013).

In October 2000, the ARB issued a report entitled: "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles", which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM by 85 percent by the year 2020, in comparison to year 2000 baseline emissions. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, and to lower the sulfur content of diesel fuel to protect new, and very effective, advanced technology emission control devices

on diesel engines. When fully implemented, the DRPP will significantly reduce emissions from both old and new diesel fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, the ARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (ARB 2013).

Exposure to DPM can have immediate health effects. DPM can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, DPM has been identified as a carcinogen.

Acetaldehyde is a federal hazardous air pollutant. The ARB identified acetaldehyde as a TAC in April 1993. Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Sources of acetaldehyde include emissions from combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. A majority of the statewide acetaldehyde emissions can be attributed to mobile sources, including on-road motor vehicles, construction and mining equipment, aircraft, recreational boats, and agricultural equipment. Area sources of emissions include the burning of wood in residential fireplaces and wood stoves. The primary stationary sources of acetaldehyde are from fuel combustion from the petroleum industry (ARB 2013).

Acute exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic intoxication of acetaldehyde resemble those of alcoholism. The U.S. EPA has classified acetaldehyde as a probable human carcinogen. In California, acetaldehyde was classified on April 1, 1988, as a chemical known to the state to cause cancer (U.S. EPA 2014; ARB 2013).

Benzene is highly carcinogenic and occurs throughout California. The ARB identified benzene as a TAC in January 1985. A majority of benzene emitted in California (roughly 88 percent) comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. These sources include on-road motor vehicles, recreational boats, off-road recreational vehicles, and lawn and garden equipment. Benzene is also formed as a partial combustion product of larger aromatic fuel components. To a lesser extent, industry-related stationary sources are also sources of benzene emissions. The primary stationary sources of reported benzene emissions are crude petroleum and natural gas mining, petroleum refining, and electric generation that involves the use of petroleum products. The primary area sources include residential combustion of various types such as cooking and water heating (ARB 2013).

Acute inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene. The U.S. EPA has classified benzene as known human carcinogen for all routes of exposure (U.S. EPA 2014).

1,3-butadiene was identified by the ARB as a TAC in 1992. Most of the emissions of 1,3-butadiene are from incomplete combustion of gasoline and diesel fuels. Mobile sources account for a majority of the total statewide emissions. Additional sources include agricultural waste burning, open burning associated with forest management, petroleum refining, manufacturing of synthetics and man-made materials, and oil and gas extraction. The primary natural sources of 1,3-butadiene emissions are wildfires (ARB 2013).

Acute exposure to 1,3-butadiene by inhalation in humans results in irritation of the eyes, nasal passages, throat, and lungs. Epidemiological studies have reported a possible association between 1,3-butadiene exposure and cardiovascular diseases. Epidemiological studies of workers in rubber plants have shown an association between 1,3-butadiene exposure and increased incidence of leukemia. Animal studies have reported tumors at various sites from 1,3-butadiene exposure. In California, 1,3-butadiene has been identified as a carcinogen.

Carbon Tetrachloride was identified by the ARB as a TAC in 1987 under California's TAC program (ARB 2013). The primary stationary sources reporting emissions of carbon tetrachloride include chemical and allied product manufacturers and petroleum refineries. In the past, carbon tetrachloride was used for dry cleaning and as a grain-fumigant. Usage for these purposes is no longer allowed in the United States. Carbon tetrachloride has not been registered for pesticidal use in California since 1987. Also, the use of carbon tetrachloride in products to be used indoors has been discontinued in the United States. The statewide emissions of carbon tetrachloride are small (about 1.96 tons per year), and background concentrations account for most of the health risk (ARB 2013).

The primary effects of carbon tetrachloride in humans are on the liver, kidneys, and central nervous system. Human symptoms of acute inhalation and oral exposures to carbon tetrachloride include headache, weakness, lethargy, nausea, and vomiting. Acute exposures to higher levels and chronic (long-term) inhalation or oral exposure to carbon tetrachloride produces liver and kidney damage in humans. Human data on the carcinogenic effects of carbon tetrachloride are limited. Studies in animals have shown that ingestion of carbon tetrachloride increases the risk of liver cancer. In California, carbon tetrachloride has been identified as a carcinogen.

Hexavalent chromium was identified as a TAC in 1986. Sources of Hexavalent chromium include industrial metal finishing processes, such as chrome plating and chromic acid anodizing, and firebrick lining of glass furnaces. Other sources include mobile sources, including gasoline motor vehicles, trains, and ships (ARB 2013).

The respiratory tract is the major target organ for hexavalent chromium toxicity, for acute and chronic inhalation exposures. Shortness of breath, coughing, and wheezing were reported from a case of acute exposure to hexavalent chromium, while perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, and other respiratory effects have been noted from chronic exposure. Human studies have clearly established that inhaled hexavalent chromium is a human carcinogen, resulting in an increased risk of lung cancer. In California, hexavalent chromium has been identified as a carcinogen.

Para-Dichlorobenzene was identified by the ARB as a TAC in April 1993. The primary area-wide sources that have reported emissions of para-dichlorobenzene include consumer products such as non-aerosol insect repellants and solid/gel air fresheners. These sources contribute nearly all of the statewide para-dichlorobenzene emissions (ARB 2013).

Acute exposure to paradichlorobenzene via inhalation results in irritation to the eyes, skin, and throat in humans. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans. The U.S. EPA has classified para-dichlorobenzene as a possible human carcinogen.

Formaldehyde was identified by the ARB as a TAC in 1992. Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Photochemical oxidation is the largest source of formaldehyde concentrations in California ambient air. Directly emitted formaldehyde is a product of incomplete combustion. One of the primary sources of directly-emitted formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, can be found in many consumer products as an antimicrobial agent, and is also used in fumigants and soil disinfectants. The primary area sources of formaldehyde emissions include wood burning in residential fireplaces and wood stoves (ARB 2013).

Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute and chronic inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. Formaldehyde is classified as a probable human carcinogen.

Methylene Chloride was identified by the ARB as a TAC in 1987. Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic fabrication, and as a solvent in paint stripping operations. Paint removers account for the largest use of methylene chloride in California, where methylene chloride is the main ingredient in many paint stripping formulations. Plastic product manufacturers, manufacturers of synthetics, and aircraft and parts manufacturers are stationary sources reporting emissions of methylene chloride (ARB 2013).

The acute effects of methylene chloride inhalation in humans consist mainly of nervous system effects including decreased visual, auditory, and motor functions, but these effects are reversible once exposure ceases. The effects of chronic exposure to methylene chloride suggest that the central nervous system is a potential target in humans and animals. Human data are inconclusive regarding methylene chloride and cancer. Animal studies have shown increases in liver and lung cancer and benign mammary gland tumors following the inhalation of methylene chloride. In California, methylene chloride has been identified as a carcinogen.

Perchloroethylene was identified by the ARB as a TAC in 1991. Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents. In California, the stationary sources that have reported emissions of perchloroethylene are dry cleaning plants, aircraft part and equipment manufacturers, and fabricated metal product manufacturers. The primary area sources include consumer products such as automotive brake cleaners and tire sealants and inflators (ARB 2013).

Acute inhalation exposure to perchloroethylene vapors can result in irritation of the upper respiratory tract and eyes, kidney dysfunction, and at lower concentrations, neurological effects, such as reversible mood and behavioral changes, impairment of coordination, dizziness, headaches sleepiness, and unconsciousness. Chronic inhalation exposure can result in neurological effects, including sensory symptoms such as headaches, impairments in cognitive and motor neurobehavioral functioning, and color vision decrements. Cardiac arrhythmia, liver damage, and possible kidney damage may also occur. In California, perchloroethylene has been identified as a carcinogen.

ASBESTOS

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Serpentine rock often contains chrysotile asbestos. Serpentine rock, and its parent material, ultramafic rock, is abundant in the Sierra foothills, the Klamath Mountains, and Coast Ranges, including Trinity County.

Additional sources of asbestos include building materials and other manmade materials. The most common sources are heat-resistant insulators, cement, furnace or pipe coverings, inert filler material, fireproof gloves and clothing, and brake linings. Asbestos has been used in the United States since the early 1900's; however, asbestos is no longer allowed as a constituent in most home products and materials. Many older buildings, schools, and homes still have asbestos containing products. Various other laws have also been adopted, including laws related to the control of asbestos-containing materials during the renovation and demolition of buildings.

All types of asbestos are hazardous and may cause lung disease and cancer. Health risks to people are dependent upon their exposure to asbestos. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem. Asbestos-related disease, such

as lung cancer, may not occur for decades after breathing asbestos fibers. Cigarette smoking increases the risk of lung cancer from asbestos exposure.

REGULATORY FRAMEWORK

Air quality within the NCCAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the NCUAQMD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 1.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

STATE

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 1. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

**Table 1
Summary of Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards*	National Standards* (Primary)
Ozone (O ₃)	1-hour	0.09 ppm	–
	8-hour	0.070 ppm	0.075 ppm
Particulate Matter (PM ₁₀)	AAM	20 µg/m ³	–
	24-hour	50 µg/m ³	150 µg/m ³
Fine Particulate Matter (PM _{2.5})	AAM	12 µg/m ³	12 µg/m ³
	24-hour	No Standard	35 µg/m ³
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9 ppm	9 ppm
	8-hour (Lake Tahoe)	6 ppm	–
Nitrogen Dioxide (NO ₂)	AAM	0.030 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppb
Sulfur Dioxide (SO ₂)	AAM	–	0.03 ppm
	24-hour	0.04 ppm	0.14 ppm
	3-hour	–	0.5 ppm (1300 µg/m ³)**
	1-hour	0.25 ppm	75 ppb
Lead	30-day Average	1.5 µg/m ³	–
	Calendar Quarter	–	1.5 µg/m ³
	Rolling 3-Month Average	–	0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	No Federal Standards
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m ³)	
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent.	

* For more information on standards visit :<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
**Secondary Standard
Source: ARB 2016

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO₂, and NO₂ by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five

percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Portable Equipment Registration Program

Owners or operators of portable engines and certain other types of equipment can register their units under the ARB's Statewide Portable Equipment Registration Program (PERP). PERP allows registered equipment to be operated throughout California without having to obtain individual permits from local air districts. To qualify, equipment must meet eligibility requirements, including applicable emissions standards.

California Code of Regulations, Title 17, Section 93105, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (ATCM)

The Asbestos ATCM was signed into State law on July 22, 2002. The purpose of this regulation is to reduce public exposure to naturally occurring asbestos (NOA) from construction and mining activities that emit dust which may contain NOA. The ATCM requires regulated operations engaged in road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas where NOA is likely to be found, to employ the best available dust mitigation measures in order to reduce and control dust emissions.

REGULATORY ATTAINMENT DESIGNATIONS

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO₂ as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO₂, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM₁₀ based on the likelihood that they would violate national PM₁₀ standards. All other areas are designated "unclassified."

The air in Humboldt, Del Norte and Trinity County is considered to be in "in attainment" of state and federal ambient air quality standards, with the exception of Humboldt County, which is designated nonattainment

for the State's 24-hour PM₁₀ standard. The two pollutants of greatest concern in the region are ozone and particulate matter. The county's sunny climate, pollution-trapping mountains and valleys, along with the growing population, all contribute to the problem (NCUAQMD 2016b).

NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

The NCUAQMD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained. Responsibilities of the NCUAQMD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

In accordance with CEQA Guidelines, a project would be considered to have a significant impact if the project would:

- Conflicts with or obstructs implementation of the applicable air quality plan;
- Violates any air quality standard or contributes substantially to an existing or projected air quality violation;
- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Exposes sensitive receptors to substantial pollutant concentrations.
- Creates objectionable odors affecting a substantial number of people.

The NCUAQMD has not adopted recommended CEQA significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emission rates for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110 - New Source Review and Prevention of Significant Deterioration. Accordingly, project-generated emissions exceeding the thresholds identified in Table 2 would be considered to have a potentially significant impact (NCUAQMD 2016a, 2016b):

Table 2
Significance Thresholds for Evaluation of
Short-term and Long-term Emissions of Criteria Air Pollutants

Pollutant	Significance Thresholds	
	Daily (lbs/day)	Annual (tons/year)
Carbon Monoxide (CO)	500	100
Nitrogen Oxides (NO _x)	50	40
Particulate Matter (PM ₁₀)	80	15
Fine Particulate Matter (PM _{2.5})	50	10
Reactive Organic Gases (ROG)	50	40
Sulfur Oxides (SO _x)	80	40

The NCUAQMD does not have recommended significance thresholds for TACs, but recommends the use of the California Air Pollution Control Officers Association's guidance document: *Health Risk Assessment for Proposed Land Use Projects* (2009) for the evaluation of health risks associated with exposure to TACs.

Accordingly, incremental increases in cancer risk that exceed 10 in one million or acute and chronic non-carcinogenic health impacts that exceed a hazard index threshold of one would be considered to have a potentially significant impact.

METHODOLOGY

Short-term construction emissions were quantified using the California Emissions Estimator Model (CalEEMod), version 2013.2.2, based on estimated construction schedules, vehicle use, and off-road equipment anticipated to be required during construction. Emissions were calculated for both daily and annual conditions. Refer to Appendix A for emissions modeling assumptions and results.

Evaporative emissions associated with primary emission-source waste-water treatment processes were quantified using flow-based emission factors derived from the *TriTAC Guidance Document on Control Technology for VOC Air Emissions from Publicly Owned Treatment Works (POTWs)* (1994). These emission factors were developed in a cooperative effort of POTWs and air regulatory agencies located in California. Emission factors contained in the TriTAC guidance document were derived from a combination of data generated by the Pooled Emissions Estimation Program (PEEP), the Joint Emissions Inventory Program (JEIP) submitted to the SCAQMD per Rule 1179, and toxics inventories from individual California POTWs. Evaporative VOC emissions were calculated based on average-daily flow rates of 0.02 million gallons per day (mgd) for existing conditions and 0.35 mgd for proposed project conditions.

Long-term increases of toxic air contaminants were quantified based on emission factors derived from the *TriTAC Guidance Document on Control Technology for VOC Air Emissions from Publicly Operated Treatment Works* for primary TAC emission sources. Potential short-term exposure to TACs and associated health risks were assessed based on a screening-level health risk assessments prepared for onsite evaporative emissions of TACs and the proposed emergency generator. To ensure a conservative analysis, the generator was assumed to be diesel fueled. The generator was assumed to operate 200 hours per year, in accordance with NCUAQMD permitting limitations.

Potential exposure of nearby sensitive receptors to odorous emissions was qualitatively assessed, based on a review of project-generated emissions, proposed emission sources, and the location of nearby sensitive receptors.

PROJECT IMPACTS

Impact AQ-1: Would the project conflict with or obstruct implementation of any applicable air quality plan?

Trinity County is designated attainment or unclassified for state and federal ambient air quality standards. However, projects that would result in a significant increase in emissions are generally considered to potentially conflict with or obstruct with the maintenance and continued attainment of air quality standards.

As noted in Impact AQ-2, the proposed project would not result in significant short-term or long-term increases of criteria air pollutants that would exceed applicable thresholds. As a result, implementation of the proposed project is not anticipated to result in a substantial increase in either direct or indirect emissions that would conflict with or obstruct air quality planning efforts. This impact is considered **less than significant**. (Refer to Impacts AQ-2 for a more detailed discussion of air quality impacts.)

Impact AQ-2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Short-term Construction

Short-term increases in emissions would occur during the construction process. Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. The proposed project would include the demolition of an approximate 200 square foot existing building, grading and site work at the WWTP and the sludge drying beds, concrete form work, the installation of equipment, piping, and electrical. Up to 9,500 cubic yards (cy) of soil would be exported and 13,000 cy imported. Demolition, grading, and site work would occur concurrently. Other activities, such as building construction, site piping and electrical could potentially occur simultaneously (PACE Engineering 2016). Construction of the proposed improvements would occur over an estimated six to 12-month period. The project's overall construction schedule would depend on a number of factors including regulatory approvals, funding commitments, and contractor availability and scheduling. Estimated construction-generated emissions are summarized in Table 3.

**Table 3
Construction-Generated Emissions of Criteria Air Pollutants**

Construction Activity	Daily Emissions (lbs/Day) ⁽¹⁾					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	0.4	4.1	3.9	0	0.2	0.2
Grading & Site Work at WWTP	0.5	3.5	4.1	0	4.3	0.7
Grading & Site Work at ERBs and Sludge Drying Beds	4.8	44.6	59.0	0.1	9.1	3.6
Concrete Form Work & Pours	0.2	1.3	1.6	0	0.2	0.1
Equipment Installation	0.5	4.9	2.8	0	0.3	0.3
Building Construction	0.2	1.8	2.0	0.0	0.2	0.1
Site Piping & Electrical	0.2	1.3	1.7	0.0	0.2	0.1
Final Grading & Paving at WWTP	5.8	7.3	5.8	0.0	0.5	0.4
Maximum Daily Emissions⁽²⁾:	5.8	44.6	59.0	0.1	9.1	3.6
<i>Daily Significance Thresholds:</i>	50	50	500	80	80	50
<i>Exceed Daily Thresholds?</i>	No	No	No	No	No	No
Annual Emissions:	0.1	0.6	0.7	0	0.1	0.1
<i>Annual Significance Thresholds:</i>	40	40	100	40	15	10
<i>Exceed Annual Thresholds?</i>	No	No	No	No	No	No

1. Emissions were quantified using CalEEMod, version 2013.2.2. Totals may not sum due to rounding.
 2. Demolition, grading and site work would occur concurrently. Other activities, such as building construction, site piping and electrical could potentially occur simultaneously (PACE Engineering 2016).
 Refer to Appendix C for modeling results and assumptions.

The proposed project would generate maximum uncontrolled annual emissions of approximately 5.8 lbs/day of ROG, 44.6 lbs/day of NO_x, 59.0 lbs/day of CO, 0.1 lbs/day of SO_x, 9.1 lbs/day of PM₁₀, and 3.6 lbs/day of PM_{2.5}. In total, construction of the project would generate annual emissions approximately 0.1 tons of ROG, 0.6 tons of NO_x, 0.7 tons of CO, 0.1 tons of PM₁₀, and 0.1 tons of PM_{2.5}. Construction-generated emissions would not exceed applicable NCUAQMD-recommended significance thresholds and would not

be considered to result in a significant regional air quality impact. However, construction activities could result in localized increases of fugitive dust that could adversely impact occupants of nearby residences and result in increased nuisance concerns. As a result, short-term construction-generated emissions of fugitive dust would be considered to have a **potentially significant** impact. (Refer to Impact AQ-4 for additional discussion of localized air quality impacts.)

Mitigation Measures

AQ-1: The following measures for the control of construction-generated PM shall be implemented. These measures shall be shown on grading and building plans:

- a. Vehicle speed for all on-site construction vehicles shall not exceed 15 mph on any unpaved surface of the construction site.
- b. All onsite unpaved roads and offsite unpaved project-site access road(s) shall be effectively stabilized of dust emissions using water or NCUAQMD-approved dust suppressants/palliatives. If water is used, watering shall be applied sufficient to keep soil moist along actively used roadways. During the dry season, unpaved road surfaces and vehicle parking/staging areas shall be watered immediately prior to periods of high use (e.g., worker commute periods, truck convoys, etc.) Reclaimed (non-potable) water shall be used to the extent available.
- c. Reduce and/or phase the amount of the disturbed area (e.g., grading, excavation) where possible.
- d. All disturbed areas anticipated to be inactive for periods of 30 days, or more, shall be treated to minimize wind-blown dust emissions. Treatment may include, but is not limited to, the application of an NCUAQMD-approved chemical dust suppressant, gravel, hydro-mulch, revegetation/seedling, or wood chips,
- e. All active and inactive disturbed surface areas shall be compacted, where feasible.
- f. Stockpiles of dirt or other fine loose material shall be stabilized by watering or other appropriate methods sufficient to reduce visible dust emissions. If necessary and where feasible, 3-sided barriers shall be constructed around storage piles and/or piles shall be covered by use of tarps, hydro-mulch, woodchips, or other materials sufficient to minimize wind-blown dust.
- g. Water shall be applied prior to and during the demolition of onsite structures sufficient to minimize wind-blown dust.
- h. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114.
- i. Haul trucks and off-road equipment leaving the site shall be washed with water or high-pressure air, and/or use rocks/grates at the project entry points, when necessary, to remove soil deposits and to minimize the track-out/deposition of soil onto nearby paved roadways.
- j. Paved road surfaces located adjacent to the site access road(s), including adjoining paved aprons, shall be cleaned, as necessary, to remove visible accumulations of track-out material. If dry sweepers are used, the area shall be sprayed with water prior to sweeping to minimize the entrainment of dust. Reclaimed water shall be used to the extent available.
- k. Portable equipment, 50 horsepower (hp) or greater, used during construction activities (e.g., portable generators) shall be registered with California statewide portable equipment registration (issued by the California Air Resources Board) or permitted by NCUAQMD.
- l. Off-road equipment shall be maintained and properly tuned in accordance with manufacturer recommendations.
- m. The owner/operator shall require that off-road diesel engines be shut off when not in use for more than five minutes to reduce emissions from idling, to the extent possible.

- n. Alternatively fueled equipment (e.g., electric, propane, etc.), in lieu of diesel- or gasoline-fueled equipment, shall be used whenever possible and to the extent locally available.
- o. All on-road and off-road equipment shall be fitted with emission control devices (e.g., diesel particulate filters, oxidation catalysts, etc.), per manufacturer recommendations.
- p. The on-site idling of on-road diesel fueled trucks shall be restricted to no more than 5 minutes, per ARB engine idling limitations, excluding vehicles that need to idle as part of their operation, such as concrete mixer trucks.

Level of Significance after Mitigation

Implementation of the proposed mitigation measures would reduce fugitive dust emissions by approximately 50 to 61 percent. Additional measures have also been included that would reduce emissions of diesel PM from on-road vehicles and off-road equipment. Implementation of the proposed mitigation measures would also ensure compliance with applicable NCUAQMD rules and regulations, including Rule 104, for the control of fugitive dust emissions. With mitigation, this impact would be considered **less than significant**.

Long-term Operation

Primary emission sources associated with the operation of the WWTP include evaporative emissions of VOCs that occur during the treatment process, mobile-source emissions associated with the vehicle trips to and from the facility, as well as occasional emissions from onsite stationary combustion sources, including occasional landscape maintenance activities and operation of the proposed emergency generator. Operational emissions associated with the plant's primary emission sources are discussed separately, as follows:

Wastewater Treatment Evaporative Emissions

Evaporative emissions of VOCs are typically associated with water treatment facilities that contain high levels of VOCs in the wastewater influent, such as water treatment facilities at industrial and agricultural uses. Wastewater influent at municipal WWTPs typically includes influent generated by residential, institutional, and commercial land uses, which typically contain only trace levels of VOCs. The project's sewer service area is comprised predominantly of residential uses. As a result, the waste sources and evaporative emissions of VOCs associated with existing and proposed WWTP operations are anticipated to be minor.

Sources of VOCs at municipal WWTPs are primarily associated with processes that result in the surface volatilization of emissions, particularly during the activated sludge process and secondary clarification, as well as surface volatilization during the thickening, dewatering, and handling of biosolids. Evaporative emissions associated with primary emission-source processes were quantified using flow-based emission factors derived from the *TriTAC Guidance Document on Control Technology for VOC Air Emissions from POTWs* (1994). These emission factors were developed in a cooperative effort of publicly-owned treatment works (POTWs) and air regulatory agencies located in California. Emission factors contained in the TriTAC guidance document were derived from a combination of data generated by the Pooled Emissions Estimation Program (PEEP), the Joint Emissions Inventory Program (JEIP) submitted to the SCAQMD per Rule 1179, and toxics inventories from individual California POTWs. These PEEP and JEIP emission factors are flow-based, specific to the individual treatment processes, and are considered to provide a conservative estimation of emissions. Evaporative emissions were quantified for existing and proposed project conditions based on an existing average-daily flow rate of 0.2 mgd and a proposed project average-daily flow rate of 0.35 mgd. Evaporative VOC emissions associated with wastewater treatment processes are summarized in Table 4.

**Table 4
Wastewater Treatment Plant Process VOC Emissions**

Process	VOC Emissions (lbs/year) ¹
Existing Conditions	
Headworks	0.00
Grit Removal	0.01
Primary Sedimentation	0.80
Flow Equalization	2.14
Activated Sludge	3.80
Secondary Clarifiers	0.24
Effluent Filtration	0.01
Chlorination	0.02
Final Effluent Discharge Weir	0.00
Dissolved Air Flotation	0.25
Sludge Digestion	0.21
Total Emissions (lbs/year):	8.08
Total Emissions (tons/year):	0.004
Proposed Project	
Headworks	0.04
Grit Removal	0.21
Primary Sedimentation	14.00
Flow Equalization	37.44
Activated Sludge	66.5
Chlorination	0.32
Sludge Digestion	3.59
Total Emissions (lbs/year):	132.58
Total Emissions (tons/year):	0.066
<i>Emissions were calculated using emission factors derived from Tri-TAC Guidance Document on Control Technology for VOC Air Emissions from POTWs (1994) based on an average flow rate of 0.02 mgd for existing conditions and 0.35 mgd for proposed project conditions.</i>	

In comparison to existing operations, the proposed project is not anticipated to result in a change in worker vehicle trips. However, the proposed project would result in approximately one haul truck trip annually for the removal of septage waste. In addition, the proposed project would also include the installation of an emergency standby power generator for use during power outages. The specific size of the generator is not yet known. However, based on equipment installed for similar facilities, it is estimated that an approximate 375 horsepower generator would be required. The generator will be sized to operate all essential pumps, process equipment, and control systems. The generator would be required to comply with NCUAQMD's permitting requirements and operational limitations. Accordingly, the emergency standby power generator would only be operated for maintenance, testing, required regulatory purposes, and during emergency situations. Total project-generated operational emissions, including emissions from wastewater treatment processes, landscape maintenance activities, operation of the emergency generator, and motor vehicle trips are summarized in Table 5.

**Table 5
Summary of Daily Operational Emissions of Criteria Air Pollutants**

Construction Activity	Annual Emissions (lbs/Day) ¹					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
WWTP Process Emissions ²	0.36					
Landscape Maintenance	6.97	0	0	0	0	0
Emergency Generator ³	4.13	45.22	20.13	0.10	0.20	0.20
Motor Vehicle Use ⁴	11.39	48.19	23.28	0.10	1.64	1.47
<i>Total Daily Emissions:</i>	<i>22.85</i>	<i>93.41</i>	<i>43.41</i>	<i>0.20</i>	<i>2.99</i>	<i>2.82</i>
<i>Net Increase Compared to Existing:</i>	<i>22.82</i>	<i>93.41</i>	<i>43.41</i>	<i>0.20</i>	<i>2.99</i>	<i>2.82</i>
<i>Daily Significance Thresholds:</i>	<i>50</i>	<i>50</i>	<i>500</i>	<i>80</i>	<i>80</i>	<i>50</i>
<i>Exceeds Daily Thresholds?</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Total Annual Emissions:</i>	<i>0.05</i>	<i>0.56</i>	<i>0.44</i>	<i>0.00</i>	<i>0.05</i>	<i>0.03</i>
<i>Annual Significance Thresholds:</i>	<i>40</i>	<i>40</i>	<i>100</i>	<i>40</i>	<i>15</i>	<i>10</i>
<i>Exceeds Annual Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

1. Emissions were quantified using CalEEMod, version 2013.2.2.
2. WWTP process emissions are based on annual emissions and 365 operational days/year.
3. Assumes 375 hp diesel fueled generator, 85% PM control efficiency with DPF per best available control technology requirements. Annual emissions assume a maximum of 200 hours annually, in accordance with NCUAQMD permitting requirements.
4. Assumes maximum of two employee trip/day, 250 days/year; 1 septage haul truck trip annually.
Refer to Appendix C for modeling results and assumptions.

As noted in Table 5, the proposed project would result in a slight increase in overall emissions. In total, the proposed project would result in net increases of approximately 22.82 lbs/day of ROG, 93.41 lbs/day of NO_x, and 43.41 lbs/day of CO, 0.2 lbs/day of SO_x, 2.99 lbs/day of PM₁₀, and 2.82 lbs/day of PM_{2.5}. On an annual basis, the project would generate approximately 0.05 tons/year of ROG, 0.56 tons/year of NO_x, and 0.44 tons/year of CO, 0.05 tons/year of PM₁₀, and 0.03 tons/year of PM_{2.5}. Annual emissions of SO_x would be negligible. The proposed project would not result in increased emissions of criteria air pollutants that would exceed applicable significance thresholds. This impact is considered **less than significant**. No mitigation is required.

Impact AQ-3: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As discussed in Impacts AQ-2, the construction and operation of the proposed project would not result in emissions that would exceed recommended significance thresholds. However, uncontrolled construction activities could result in increased concentrations of fugitive dust that could adversely impact nearby land uses. As a result, short-term construction-generated PM emissions would be considered to have a *potentially significant* impact. (Refer to Impact AQ-2 for additional discussion of short-term and long-term air quality impacts.)

Mitigation Measure

Implement Mitigation Measure AQ-1.

Level of Significance after Mitigation

With implementation of Mitigation Measure AQ-1, this impact would be considered **less than significant**. (Refer to Impacts AQ-2 and AQ-4 for additional discussion of air quality impacts.)

Impact AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Short-term Exposure

Localized PM Concentrations

Implementation of the proposed project would result in the generation of fugitive PM emitted during construction. Fugitive PM emissions would be primarily associated with earth-moving, demolition, and material handling activities, as well as, vehicle travel on unpaved and paved surfaces.

The project would also generate short-term emissions of diesel-exhaust PM. For sensitive land uses, potential increases in cancer risk associated with exposure of TACs is typically calculated based on a 70-year period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively short period (e.g., 6-12 months). For this reason, diesel-exhaust PM generated by project construction, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors.

Predicted increases in cancer risks associated with short-term exposure to diesel-exhaust emissions would be considered *less than significant*. However, because construction activities could result in increased concentrations of fugitive dust that could cause a nuisance to nearby land uses, this impact is considered **potentially significant**.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Serpentine rock often contains chrysotile asbestos. Serpentine rock, and its parent material, ultramafic rock, is abundant in the Sierra foothills, the Klamath Mountains, and Coast Ranges, including Trinity County.

All types of asbestos are hazardous and may result in an increased occurrence of lung disease and cancer. Health risks to people are dependent upon their exposure to asbestos. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem. Asbestos-related disease, such as lung cancer, may not occur for decades after breathing asbestos fibers. Cigarette smoking increases the risk of lung cancer from asbestos exposure.

The project site is located in the vicinity of known or suspected naturally occurring asbestos (NOA). As a result, construction activities involving ground disturbance, such as excavation and grading, may have a potential for disturbance of NOA. In the event that NOA is identified in the Project area, the Project would be required to comply with *California Code of Regulations, Title 17, Section 93105, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (ATCM)*, which was signed into State law on July 22, 2002. The purpose of this regulation is to reduce public exposure to NOA from construction and mining activities that emit dust which may contain NOA. The ATCM requires regulated operations engaged in road construction and maintenance activities, construction and grading

operations, and quarrying and surface mining operations in areas where NOA is likely to be found, to employ the best available dust mitigation measures in order to reduce and control dust emissions. Given the potential for disturbance of NOA, this impact is considered **potentially significant**. (A map depicting areas of known or suspected NOA in the project vicinity is included in Appendix B.)

Asbestos-Containing Materials

Construction of the proposed project would require the demolition of some onsite facilities. Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during demolition of existing buildings, particularly older structures constructed prior to 1970. Asbestos can also be found in various building products, including (but not limited to) utility pipes/pipelines (transite pipes or insulation on pipes). If a project will involve the disturbance or potential disturbance of ACM, various regulatory requirements may apply, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - Asbestos NESHAP). These requirements include requirements for notification, conducting asbestos surveys and for the removal and disposal of ACM. Because the proposed project would require the demolition of onsite structures, this impact is considered **potentially significant**. (A summary of NCUAQMD notification requirements for asbestos demolition and renovation requirements is included in Appendix B.)

Mitigation Measures

AQ-2: The following measures shall be implemented to reduce exposure of sensitive receptors to substantial pollutant concentrations. These measures shall be shown on grading and building plans:

- a. Implement Mitigation Measure AQ-1.
- b. A geologic survey of the Project area shall be conducted. In the event that naturally occurring asbestos is identified in the Project area, the Project shall comply with *California Code of Regulations, Title 17, Section 93105, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations* (ATCM). The ATCM requires implementation of the best available dust mitigation measures in order to reduce and control dust emissions, such as those identified in Mitigation Measure AQ-1. (Additional information may be obtained at website url: <http://ncuaqmd.org/index.php?page=asbestos>.)
- c. Demolition of onsite structures shall comply with the National Emission Standards for Hazardous Air Emissions requirements (NESHAP, 40 CFR, Part 61, Subpart M) for the demolition of existing structures. The NCUAQMD is delegated authority by the Environmental Protection Agency to implement the Federal Asbestos NESHAP. Prior to demolition of onsite structures, the NCUAQMD shall be notified, per NESHAP requirements. (Additional information may be obtained at website url: <http://ncuaqmd.org/index.php?page=asbestos>.)

Level of Significance after Mitigation

Implementation of the above mitigation measures would require implementation mitigation measures to minimize fugitive emissions emitted during demolition and construction. Compliance with NCUAQMD rules and regulations pertaining to the control of NOA and ACM would also be required. With mitigation, this impact would be considered **less than significant**.

Long-term Exposure

Localized pollutant concentrations associated with the long-term operation of the proposed project would be primarily associated with localized concentrations of TACs. Increases of TACs would be primarily associated with the operation of the proposed emergency standby power generator (if diesel powered), as well as, evaporative emissions from onsite treatment processes. TAC emissions and associated health risks associated with these sources are discussed, as follows:

Emergency Generator

As previously noted, the proposed project would include the installation of an emergency standby power generator for use during power outages. The specifications for the generator, including size and fuel source, have not yet been identified. However, based on equipment installed for similar land uses, an approximate 375 hp generator was assumed to be required. The existing generator would be required to comply with NCUAQMD's permitting requirements and operational limitations. Accordingly, the emergency standby power generator would only be operated for maintenance, testing, required regulatory purposes, and during emergency situations. The emergency generator would be located at the proposed WWTP. The screen risk assessment was conducted for both onsite and offsite receptors, assuming a minimum distance of 45 feet to the nearest residence.

A screening-level health risk assessment was conducted for the proposed emergency generator. To ensure a conservative analysis, the generator was assumed to be diesel fueled. The generator was assumed to operate 200 hours per year, in accordance with NCUAQMD's permitting limitations. As noted earlier in this report, diesel-exhaust PM has been identified as a TAC. Based on these assumptions, the proposed generator would result in increased cancer risks of approximately 3.7 in a million and a chronic/acute hazard index of 0.7 at the nearest receptor. Emissions modeling assumptions and results are included in Appendix C.

Wastewater Treatment Process Emissions

As with emissions of VOCs/ROGs discussed earlier in this report, evaporative TACs emitted by WWTPs are typically considered minor. Because most emissions of TACs occur during the treatment process in which dissolved volatile organic compounds are volatilized, emissions of TACs are generally considered to be roughly proportional to the wastewater influent flow rates associated with the individual treatment processes. Evaporative emissions were quantified based on an existing flow rate of 0.2 mgd and a projected project flow rate of 0.35 mgd. A screening-level health risk assessment was prepared to analyze cancer, chronic non-cancer, and acute non-cancer health risks. The screen risk assessment was conducted for both onsite and offsite receptors, assuming a minimum distance of 45 feet to the nearest off-site receptor. The annual emissions of TACs and associated health risks are summarized in Table 6. As depicted, TACs emitted by wastewater treatment processes would result in predicted cancer risks would be less than 0.1 in ten million and the predicted hazard index for non-cancer acute and chronic risks would be less than 0.01 for both onsite and offsite receptors.

Combined Health Risks

For the assessment of potential health-related impacts associated with TACs, a cancer-risk thresholds of 10 in one million and a non-cancer risk hazard index of one was applied. Stationary emission sources that exceed these thresholds would be considered to have a potentially significant impact. Based on the screening-level health risk assessments conducted, combined health risks associated with the operation of the proposed emergency generator and evaporative TAC emissions from onsite treatment processes would result in a combined cancer risk of 3.7 in a million and a chronic/acute hazard index of 0.7 at the nearest receptor. Potential health risks would be predominantly associated with the proposed emergency generator (assuming that the generator would be diesel powered). Predicted cancer and non-cancer health risks from these sources would not exceed the recommended significance thresholds. It is also important to note that the proposed emergency generator would be required to comply with NCUAQMD permitting requirements, including NCUAQMD Rule 110, which establishes permitting requirements for stationary sources. Compliance with NCUAQMD rules and regulations would further ensure that health risks to nearby receptors would not exceed applicable standards. For these reasons, this impact would be considered **less than significant**. No mitigation is required.

Table 6
Operational TACs & Health Risks Associated with Wastewater Treatment Processes

TACs	Emissions (lbs/year)	
	Existing Conditions ¹	Proposed Project ²
Benzene	0.03	0.61
Ethyl-Benzene	0.02	0.43
Toluene	0.15	2.62
Xylenes	0.14	2.46
Chloroform	0.17	1.68
Methylene Chloride	0.22	1.57
Tetrachloroethylene	0.32	3.02
1,1,1-Trichloroethane	0.32	2.32
Acetone	0.53	5.09
Methyl Ethyl Ketone (MEK)	0.11	1.02
Methyl Isobutyl Ketone (MIBK)	0.10	0.92
Carcinogenic Risk (Onsite):	0.01	0.08
Carcinogenic Risk (Nearest Offsite Receptor) ⁽¹⁾ :	<0.01	0.02
Significance Threshold ⁽²⁾ :	10	10
Exceeds Cancer Risk Threshold?	No	No
Non-Carcinogenic Acute Risk ⁽³⁾ :	<0.01	<0.01
Non-Carcinogenic Chronic Risk ⁽³⁾ :	<0.01	<0.01
Significance Threshold ⁽²⁾ :	1	1
Exceeds Non-Cancer Risk Thresholds?	No	No
¹ . Based on distance of 45 feet to the nearest receptor. ² . Significance thresholds are based on commonly applied thresholds for the evaluation of increased cancer risk and non-cancer acute and chronic health risks. ³ . Includes onsite worker and offsite receptors. Refer to Appendix C for modeling results and assumptions.		

Impact AQ-5: Would the project create objectionable odors affecting a substantial number of people?

The project would increase the treatment capacity of the plant from an existing average-daily flow of approximately 0.2 mgd to approximately 0.35 mgd. However, an increase in odor potential (e.g. treatment of higher volumes of wastewater) does not necessarily result in a greater odor impact to the surrounding community. The location, size, and type of the treatment facilities, the sensitivity of nearby receptors, and the direction and speed of prevailing winds are all factors in determining whether odors from the treatment plant are likely to have a significant effect on the surrounding community. Processes having the greatest potential for odor generation at WWTPs are typically associated with sludge handling and drying practices. Potential increases in odors may be offset by improvements in design and/or operational procedures, including the use of chemicals and incorporation of additional treatment technologies.

In comparison to the existing facility, the proposed project would result in additional treatment processes that would help to reduce the odor-generation potential of the facility, including effluent filtration,

chlorination, and aerobic sludge digestion. In addition, use of the existing Imhoff tank for the treatment of wastewater, which is a source of odors associated with the existing facility, would be discontinued. Continued operation of the sludge storage basins would, however, still result in odorous emissions.

WWTPs located within approximately one mile of sensitive land uses are generally considered to have a potentially significant impact with regard to nuisance odors. Given that residential land uses are located within one mile of the proposed treatment plant and sludge drying beds, this impact is considered **potentially significant**.

Mitigation Measure

AQ-3: An Odor Control Mitigation Plan (OCMP) shall be prepared for the proposed project for the control of nuisance impacts to nearby sensitive land uses. The OCMP shall identify processes that would have a high potential for odor generation and appropriate operational controls and procedures for the control and reduction of odorous emissions. The OCMP shall be submitted to and approved by Trinity County Planning Department prior to operation.

Level of Significance after Mitigation

Mitigation Measure AQ-2 would require the preparation of an odor control plan. Implementation of the OCMP would help to minimize and control odorous emissions from the facility. In addition, the OCMP would also help to ensure compliance with applicable NCUAQMD rules and regulations for the control of nuisance impacts. With mitigation, this impact would be considered **less than significant**.

GREENHOUSE GASES AND CLIMATE CHANGE

EXISTING SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHGs) that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide.** Carbon dioxide (CO₂) is a colorless, odorless gas. CO₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO₂ emissions. The atmospheric lifetime of CO₂ is variable because it is so readily exchanged in the atmosphere (U.S. EPA 2008).
- **Methane.** Methane (CH₄) is a colorless, odorless gas that is not flammable under most circumstances. CH₄ is the major component of natural gas, about 87percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management.

These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2015a).

- **Nitrous Oxide.** Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (U.S. EPA 2015b).
- **Hydrofluorocarbons.** Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2015c).
- **Perfluorocarbons.** Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (U.S. EPA 2015a).
- **Nitrogen Trifluoride.** Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. It has a global warming potential of 17,200 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high global warming potential GHG to be listed and regulated under Assembly Bill (AB) 32 (Section 38505 Health and Safety Code).
- **Sulfur Hexafluoride.** Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2015e).
- **Black Carbon.** Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (ARB 2014).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted. Table 7 shows the GWP for the GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane traps over 25 times more heat per molecule than CO₂, and N₂O absorbs roughly 298 times more heat per molecule than CO₂. Additional GHG with high GWP include Nitrogen trifluoride, Sulfur hexafluoride, Perfluorocarbons, and black carbon.

**Table 7
Global Warming Potential for Greenhouse Gases**

Greenhouse Gas	Global Warming Potential (100-year)
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous Dioxide (N ₂ O)	298
<i>*Based on IPCC GWP values for 100-year time horizon</i>	

SOURCES OF GHG EMISSIONS

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions (U.S. EPA 2015d).

In 2013, GHG emissions within California totaled 459 million metric tons (MMT) of CO₂e. GHG emissions, by sector, are summarized in Figure 3. Within California, the transportation sector is the largest contributor, accounting for approximately 37 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 23 percent. Electricity generation totaled roughly 20 percent (Refer to Figure 3).

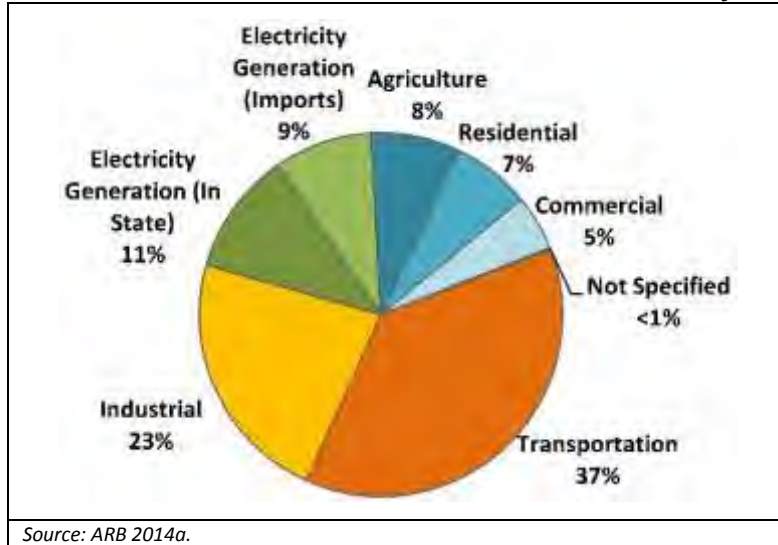
EFFECTS OF GLOBAL CLIMATE CHANGE

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snow pack is a principal supply of water for the state, providing roughly 50 percent of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. An early exhaustion of the Sierra snowpack, may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate

will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry (ARB 2015).

**Figure 3
California Greenhouse Gas Emissions Inventory**



REGULATORY FRAMEWORK

FEDERAL

INTERNATIONAL REGULATION AND THE KYOTO PROTOCOL

The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC). While the United States signed the Kyoto Protocol, which would have required reductions in GHGs, Congress never ratified the protocol. The federal government chose voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. In 2002, the United States announced a strategy to reduce the greenhouse gas intensity of the American economy by 18 percent over a 10-year period from 2002 to 2012.

As part of the commitments to the UNFCCC, the U.S. EPA has developed an inventory of anthropogenic emissions by sources and removals by sinks of all GHGs. This inventory is periodically updated, with the latest update in 2010. The U.S. EPA reports that total US emissions rose by 14 percent from 1990 to 2007, while the US gross domestic product increased by 59 percent over the same period. A 2.9 percent decrease in emissions was noted from 2007 to 2008, which is reported to be attributable to climate conditions, reduced use of petroleum products for transportation, and increased use of natural gas over other fuel sources. The inventory notes that the transportation sector emits about 32 percent of CO₂ emissions, with 53 percent of those emissions coming from personal automobile use. Residential uses, primarily from energy use, accounted for 21 percent of CO₂ emissions (U.S. EPA 2015a).

As a part of the U.S. EPA's responsibility to develop and update an inventory of U.S. GHG emissions and sinks, the U.S. EPA compared trends of other various US data. Over the period between 1990 and 2008, GHG emissions grew at an average rate of about 0.7 percent per year. Population growth was slightly higher at 1.1 percent, while energy and fossil fuel consumption grew at 0.9 and 0.8 percent, respectively. Gross domestic product and energy generation grew at much higher rates.

Executive Order 13514

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. U.S. EPA*, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO₂ level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles (Caltrans 2015).

STATE

Assembly Bill 1493

AB 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of

California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO₂. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order No. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Executive Order No. S-01-07

Executive Order S-1-07, the Low Carbon Fuel Standard (LCFS) was issued on January 18, 2007 and called for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. This order instructed the CalEPA to coordinate activities between the University of California, the California Energy Commission (CEC) and other state agencies to develop and propose a draft compliance schedule to meet the 2020 target. Furthermore, it directed ARB to consider initiating a regulatory proceedings to establish and implement the LCFS. In response, ARB adopted the LCFS regulation in 2010.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32 (ARB 2014b).

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of roughly 169 million metric tons of CO₂e, or approximately 29 percent from the state's projected 2020 emissions level in comparison to business-as-usual (BAU) 2002–2004 conditions. The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 MMTCO₂e), implementation of the Low Carbon Fuel Standard (15.0 MMTCO₂e) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMTCO₂e), and a renewable portfolio standard for electricity production (21.3 MMTCO₂e). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008.

Key components of the Scoping Plan focus on energy efficiency, conservation, and use of renewable energy. For instance, the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by year 2020, would result in a reduction of 21.3 MMTCO₂e. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions. The Scoping Plan also recognizes that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.

The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The first update of the Scoping Plan was approved by ARB on May 22, 2014, which looked past 2020 to set mid-term goals to reach post 2020 emission-reduction targets.

Executive Order B-30-15

On April 29, 2015, the Governor issued Executive Order B-30-15 establishing a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. All state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. ARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to achieve continue reductions in GHG emissions.

Senate Bill 1368

Senate Bill (SB) 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards)

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed ARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. This Executive Order was superseded by statute SB X1-2 in 2011, which obligates all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020, with interim targets of 20 percent by 2013 and 25 percent by 2016.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The CEC and CPUC serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

Mandatory Reporting of Greenhouse Gas Emissions

Reporting of GHGs by major sources is required by the California Global Warming Solutions Act (AB 32, 2006). Revisions to the existing ARB mandatory GHG reporting regulation were considered at the board hearing on December 16, 2010. The revised regulation was approved by the California Office of Administrative Law and became effective on January 1, 2012. The revised regulation affects industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013 and apply to large electric power plants and large industrial plants. In 2015, they will extend to fuel distributors (including distributors of heating and transportation fuels). At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total greenhouse gas emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions, and are free to buy and sell allowances on the open market. California held its first auction of greenhouse gas allowances on November 14, 2012. California's GHG cap-and-trade system will reduce GHG emissions from regulated entities by approximately 16 percent, or more, by 2020.

California Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards. Both are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction in greenhouse gas emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan, ARB estimated that green building standards would reduce GHG emissions by approximately 26 MMTCO_{2e} by 2020.

The green buildings standards, commonly referred to as CalGreen standards, were most recently updated in 2013. The 2013 building energy efficiency standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for non-residential construction (CEC 2015).

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

In accordance with CEQA Guidelines, a project would be considered to have a significant impact to climate change if it would:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or,
- b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The NCUAQMD has not yet identified recommended GHG significance thresholds for the evaluation of development projects subject to CEQA review. However, on July 9, 2015, the NCUAQMD adopted Rule 111 for the evaluation of GHG emissions for stationary sources subject to New Source Review and federal Title V permitting requirements. In accordance with this rule, stationary sources that emit less than 25,000 tons per year of CO_{2e} are exempt from determining compliance. This threshold is intended for purposes of determining compliance with federal Title V stationary source permitting requirements and is not recommended for the evaluation of GHG emissions for stationary source projects subject to CEQA review. However, various other air districts in the state have identified recommended GHG significance thresholds for stationary sources, including the Sacramento Metropolitan Air Quality Management District, San Luis Obispo County Air Pollution Control District, The Bay Area Air Quality Management District, and the South Coast Air Quality Management District. For stationary sources, these air districts have identified a GHG threshold of 10,000 MTCO_{2e}/year. In the absence of a NCUAQMD-recommended GHG significance threshold, a GHG significance threshold of 10,000 MTCO_{2e}/year has been used for evaluation of project-

generated GHG emissions. GHG emissions exceeding 10,000 MTCO_{2e}/year would be considered to have a potentially significant impact and the environment that could interfere with AB-32 GHG-reduction goals.

METHODOLOGY

Construction-generated GHG emissions would be primarily associated with the operation of off-road construction equipment, worker commute trips, and material haul truck trips. GHG emissions associated with the long-term operation of the proposed project would be primarily associated with the operation of the proposed emergency generator, worker vehicle trips, haul truck trips for the removal of septage waste, and electricity use. Short-term construction and long-term operational GHG emissions were quantified using the CalEEMod computer program, based on project-specific construction and operational information provided by the project engineer. GHG emissions associated with wastewater treatment process emissions would be considered negligible (ARB 2010). Construction-generated emissions were amortized based on a 25-year project life. To be conservative, amortized construction-generated emissions of GHGs were included in the estimated operational GHG emissions estimate for comparison to the GHG significance threshold.

PROJECT IMPACTS

Impact GHG-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? and
Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Implementation of the proposed project would result in short-term construction and long-term operational emissions of GHGs. Short-term construction and long-term operational emissions of GHGs are discussed, as follows:

Short-term Construction

Construction of the proposed facilities would occur over an approximate six to 12 month period. Estimated increases in GHG emissions associated with construction of the proposed project are summarized in Table 8. As depicted, project construction would generate a total of approximately 212 MTCO_{2e}. Amortized GHG emissions, when averaged over an assumed 25-year project life, would total approximately 8.5 MTCO_{2e}/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative.

Long-term Operations

Operational emissions would be primarily associated with the proposed emergency generator and the use of motor vehicle trips. Approximately two worker trips and one septage haul truck trip could occur on any given day. The removal of septage is anticipated to occur once annually. To be conservative, worker vehicle trips were assumed to occur approximately 250 days annually. To a lesser extent, energy use associated with the operation of onsite pumps and motors would also result in increased GHG emissions. Operational emissions are summarized in Table 9. With the inclusion of amortized construction emissions the project would result in a net increase of approximately 123.3 MTCO_{2e}/year. Annual GHG emissions would not exceed the GHG significance threshold of 10,000 MTCO_{2e}. The proposed project would not result in GHG emissions that would have a significant impact on the environment, nor would the proposed project conflict with applicable GHG-reduction plans, policies or regulations. This impact would be considered **less than significant**. No mitigation is required.

**Table 8
Construction-Generated GHG Emissions**

Construction Year	Annual Emissions (MTCO ₂ e/Year) ¹
Demolition	5.4
Grading & Site Work at WWTP	4.7
Grading & Site Work at ERBs and Sludge Drying Beds	86.0
Concrete Form Work & Pours	2.6
Equipment Installation	0.6
Building Construction	4.2
Site Piping & Electrical	1.7
Final Grading & Paving at WWTP	1.0
Total Emissions all Project Components:	212
Amortized Construction Emissions ² :	8.5
<p>1. Assumes all construction components would occur within a single year. 2. Amortized emissions are quantified based on an estimated 25-year project life.</p>	

**Table 9
Operational GHG Emissions**

Source	Annual Emissions (MTCO ₂ e/year)
Energy Use ¹	0.4
Generator	40.4
Motor Vehicle Use ²	74.0
Amortized Construction ³	8.5
Total:	123.3
Significance Threshold:	10,000
Exceeds Threshold?:	No
<p>1. Energy use assumes wastewater treatment of 0.32 mgd/day, 2. Assumes two employee trips daily; 1 septage haul truck annually. 3. Based on an assumed 25-year project life. Refer to Table 8. 4. WWTP process emissions for existing and proposed project conditions are considered negligible (LGOP 2010). Refer to Appendix C for emissions modeling assumptions and results.</p>	

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APPENDIX A

Federal Air Quality General Conformity

Federal Code of Regulations

Title 40 of the Code of Federal Regulations, Part 93, requires that the federal government not engage, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved CAA implementation plan. Title I, section 176(c)(1), of the CAA defines conformity as the upholding of "an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving attainment of such standards." Accordingly, proposed Federal actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of any NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity regulations take into account air pollutant emissions associated with actions that are federally funded, licensed, permitted, or approved. These regulations ensure that emissions associated with federal actions do not contribute to air quality degradation, thus preventing the achievement of state and federal air quality goals. In short, General Conformity refers to the process of evaluating plans, programs, and projects to determine and demonstrate that they meet the requirements of the CAA and applicable SIP. In general, the General Conformity regulations divide the air conformity process into two distinct areas: (1) Applicability Analysis, and (2) Conformity Determination. Federal agencies must initially assess if an action is subject to the Conformity Rule (Applicability Analysis) and then, if applicable, whether the action conforms to an applicable implementation plan (Conformity Determination).

On March 24, 2010, the U.S. EPA revised the General Conformity regulations. These most recent revisions improve the process federal entities use to demonstrate that their actions will not contribute to a NAAQS violation, provides tools to encourage better communication and air quality planning between states and federal agencies, and encourages both the federal agencies and the states to take early actions to ensure projects will conform to the appropriate state, tribal, or federal implementation plans for attaining or maintaining the NAAQS. The following is a summary of the revisions recently made to the Conformity regulations¹:

- Allows federal facilities expecting future expansion or modifications to negotiate a facility-wide emission budget with applicable state air quality agencies. Actions taken that do not exceed these budgets would be deemed to conform to the SIP and would not need a conformity determination.
- Incorporates an early emission reduction credit program for all agencies that follow the Airport Early Emission Reduction guidance developed jointly by EPA and the Federal Aviation Administration. This program encourages emission reduction actions on federal installations by providing emission reduction credits that can be used to demonstrate conformity for subsequent actions on the facility.
- Allows emissions of one precursor pollutant to be offset by the reduction of emissions of another precursor pollutant. For example both oxides of nitrogen and volatile organic compounds are ozone precursors – they are emitted and then react in the atmosphere to form ground-level ozone. In an area that does not meet EPA's ground-level ozone standard, reductions in nitrogen oxide emissions could be offset by reductions of volatile organic compounds.

¹ United States Environmental Protection Agency (U.S. EPA). Accessed: February 24, 2016. General Conformity, Regulatory Actions, Final revisions to the General Conformity Regulations. Fact Sheet. Available at: [url: https://www3.epa.gov/airquality/genconform/documents/20080108_NPRM_fs.pdf](https://www3.epa.gov/airquality/genconform/documents/20080108_NPRM_fs.pdf).

- Allows alternative schedules for mitigating emission increases where state air quality agencies can accommodate temporary emission increases in exchange for long-term or permanent emission reductions.
- Removes requirements for federal agencies to conduct conformity determinations for “regionally significant” actions. Such actions have emissions greater than 10 percent of the emissions inventory for a nonattainment area. These analyses have been conducted for 16 years and have never shown an action to interfere with attainment or maintenance of a NAAQS.
- Lists categories of actions that federal agencies can presume to conform. The final rule also allows states to establish “presumed to conform” lists for actions in their state.

General Conformity Emission Levels

When assessing the applicability of a proposed Federal action to General Conformity requirements, General Conformity requirements would be deemed to apply to a Proposed Federal action when the total of direct and indirect emissions caused by the Federal action would equal or exceed the *de minimis* emission levels of criteria pollutants within corresponding nonattainment or maintenance areas. General Conformity *de minimis* emission levels, expressed in tons per year (tons/yr), are summarized in Table A-1.

If the federal action will cause emissions that equal or exceed the *de minimis* emission levels in any nonattainment or maintenance area and the action is not otherwise exempt, “presumed to conform,” or included in the existing emissions budget of the applicable implementation plan for attaining or maintaining the NAAQS, the agency must conduct a conformity determination before implementation of the proposed Federal action (U.S. EPA 2010).

Exemptions from General Conformity Requirements

In accordance with General Conformity regulations, the following actions are exempt:

- Actions where the total of direct and indirect emissions are below the specified emissions levels
- Actions which would result in no emissions increase or an increase in emissions that is clearly *de minimis*
- Actions where the emissions are not reasonably foreseeable, such as the following:
 - Initial Outer Continental Shelf lease sales which are made on a broad scale and are followed by exploration and development plans on a project level
 - Electric power marketing activities that involve the acquisition, sale and transmission of electric energy
- Actions which implement a decision to conduct or carry out a conforming program such as prescribed burning actions which are consistent with a conforming land management plan.
- Actions which include major or minor new or modified stationary sources requiring a permit under the New Source Review program or the prevention of significant deterioration program.
- Actions in response to emergencies or natural disasters such as hurricanes, earthquakes, etc., which are commenced on the order of hours or days after the emergency or disaster and, if applicable, which meet the requirements for Federal actions which are part of a continuing response
- Actions which include research, investigations, studies, demonstrations, or training (unless otherwise exempted) where no environmental detriment is incurred and/or, the particular action furthers air quality research, as determined by the State agency primarily responsible for the applicable SIP
- Actions which include alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations (e.g., hush houses for aircraft engines and scrubbers for air emissions)

- Actions which include direct emissions from remedial and removal actions carried out under CERCLA (and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA.)

**Table A-1
General Conformity Emission Levels**

Pollutant	Emission Levels (tons per year)
Nonattainment Areas	
Ozone (VOC's or NO _x)	
Serious NAA's	50
Severe NAA's	25
Extreme NAA's	10
Other Ozone NAA's outside an ozone transport region	100
Other Ozone NAA's inside an ozone transport region	
VOC	50
NO _x	100
Carbon Monoxide: All NAA's	100
SO ₂ and NO ₂ : All NAA's	100
PM ₁₀	
Moderate NAA's	100
Serious NAA's	70
PM _{2.5}	
Direct Emissions	100
SO ₂	100
NO _x (Unless determined not be significant precursors)	100
VOC or Ammonia (if determined to be significant precursors)	100
Pb: All NAA's	25
Maintenance Areas	
Ozone (NO _x), SO ₂ or NO ₂ : All MA's	100
Ozone (VOC's):	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon Monoxide: All MA's	100
PM ₁₀ (All MA's):	100
Pb (All MA's):	25
<i>Applicable General Conformity de minimis emissions levels depicted in bold font.</i>	
<i>Source: U.S.EPA 2010</i>	

Applicability Analysis

As stated previously, the first step in a general conformity evaluation is an analysis of whether the General Conformity requirements apply to a Federal action proposed to be taken in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a Federal action requires a general conformity determination for each pollutant where the total of direct and indirect emissions caused by the Federal action would equal or exceed an annual *de minimis* emission levels for criteria air pollutants identified within corresponding nonattainment or maintenance areas.

The Proposed Action is located not located in an area designated nonattainment or maintenance for NAAQS. A general conformity evaluation is not required for this project.

Evaluation Form for Environmental Review and Federal Coordination

Applicant Name: Lewiston Community Services District

Project Title: Lewiston CSD Collection, Treatment, and Disposal Project

1. Clean Air Act:

Air Basin Name: North Coast Air Basin

Local Air District for Project Area: North Coast Unified Air Quality Management District

Is the project subject to a State Implementation Plan (SIP) conformity determination?

No - The project is in an attainment or unclassified area for all federal criteria pollutants.

Yes - The project is in a nonattainment area or attainment area subject to maintenance plans for a federal criteria pollutant. Include information to indicate the nonattainment designation (e.g. moderate, serious, severe, or extreme), if applicable. If estimated emissions (below) are above the federal *de minimis* levels, but the project is sized to meet only the needs of current population projections that are used in the approved SIP for air quality, then quantitatively indicate how the proposed capacity increase was calculated using population projections.

• The Lead Agency shall provide the estimated project construction and operational air emissions (in tons per year) in the chart below, and attach supporting calculations, regardless of attainment status.

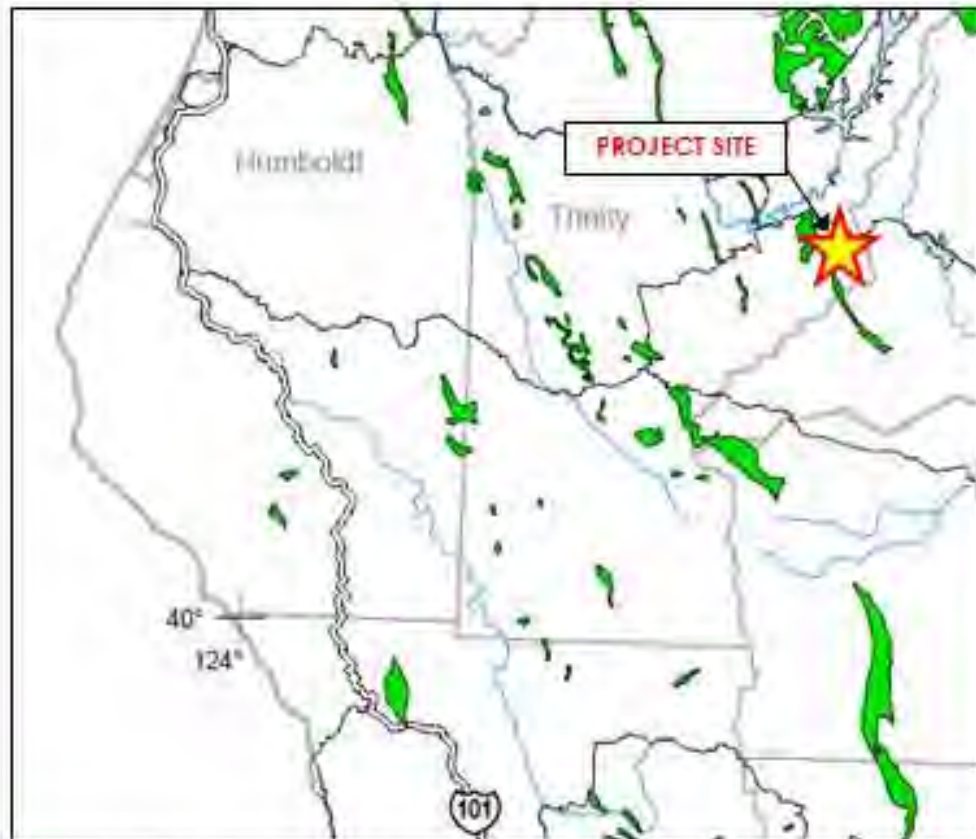
• Also, attach any air quality studies that have been done for the project.

Pollutant	Federal Status (Attainment, Nonattainment, Maintenance, or Unclassified)	Nonattainment Rates (i.e., moderate, serious, severe, or extreme)	Threshold of Significance for Project Air Basin (if applicable)	Construction Emissions (Tons/Year)	Operation Emissions (Tons/Year)
Ozone (O ₃)					
Carbon Monoxide (CO)					
Oxides of Nitrogen (NO _x)					
Reactive Organic Gases (ROG)					
Volatile Organic Compounds (VOC)					
Lead (Pb)					
Particulate Matter less than 2.5 microns in diameter (PM _{2.5})					
Particulate Matter less than 10 microns in diameter (PM ₁₀)					
Sulfur Dioxide (SO ₂)					

APPENDIX B

Naturally Occurring Asbestos & Asbestos Containing Materials

Areas of Known or Suspected Naturally Occurring Asbestos



EXPLANATION OF ULTRAMAFIC ROCK UNIT

Ultramafic rocks are dunite, peridotite, pyroxenite, and less common in California, hornblende (IUGS classification of ultramafic rocks, in Philpotts, 1990*). These igneous rocks contain 90 percent or more of the dark colored iron-magnesium-silicate minerals olivine, augite, hypersthene, or less commonly hornblende. Ultramafic rocks form in high temperature environments well below the surface of the earth. By the time they are exposed at the surface by uplift and erosion, ultramafic rocks may be partially to completely altered to serpentinite, a type of metamorphic rock. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in bodies of ultramafic rock or along their boundaries.

Note—occurrences of non-ultramafic rock types, such as gabbro or diabase, may be included within some of the ultramafic rock areas shown on this map. Asbestos is much less likely to be associated with these non-ultramafic rock types.

Source: State of California, Department of Conservation (DOC). August 2000. *A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos*. Compiled By Ronald K. Churchill and Robert L. Hill.

ASBESTOS DEMOLITION AND RENOVATION NOTIFICATION FORM GENERAL INFORMATION

The Asbestos NESHAP, 40 CFR Part 61, Subpart M, requires written notification of demolition or renovation operations under Section 61.145. This form may be used to fulfill this requirement. Only complete notification forms are acceptable. Incomplete notification may result in enforcement action.

This notification should be typewritten and postmarked or delivered no later than ten days prior to the beginning of the asbestos removal activity (dates specified in Section VIII) or demolition (dates specified in Section IX). Please submit the form, along with the appropriate fee, to:

NORTH COAST UNIFIED AQMD
707 L STREET
EUREKA, CA 95501

INSTRUCTIONS

- I. **Type of Notification:** Enter "O" if the notification is a first time or original notification. "R" if the notification is a revision of a prior notification, or "C" if the activity has been cancelled.
- II. **Facility Information:** Enter the names, addresses, contact persons and telephone numbers of the following:
 - Owner: Legal owner of the site at which asbestos is being removed or demolition planned
 - Asbestos Removal Contractor: Certified asbestos contractor hired to remove asbestos (include DOSH registration #)
 - Other Demolition or Renovation Operator: Demolition contractor, general contractor, or other person who leases, operates, controls, or supervises the site (fire dept if training burn).
- III. **Type of Operation:** Enter "D" for facility demolition, "R" for facility renovation, "O" for ordered demolition, or "E" for emergency renovation. Fire training burns are considered facility demolitions ("D").
- IV. **Is Asbestos Present?:** Answer "yes" or "no" regardless of the amount of asbestos present.
- V. **Facility Description:** Provide detailed information on the areas being renovated or demolished. If applicable, provide the floor numbers and room numbers where renovations are to be conducted.
 - Site Location: Provide information needed to locate site in event that the address alone is inadequate.
 - Building Size: Provide in square meters or square feet
 - No. of Floors: Enter the number of floors including basement or ground floors.
 - Age in Years: Enter approximate age of the facility.
 - Present Use / Prior Use: Describe the primary use of the facility or enter the following codes: H - hospital; S - school; P - public building; O - office; I - industrial; U - university or college; B - ship; C - commercial; or R - residential.
- VI. **Asbestos Detection Procedure:** Describe methods and procedures used to determine whether asbestos is present at the site, including a description of the analytical methods employed. **Building inspections must be performed by an AHERA-accredited Building Inspector (40 CFR 763, Subpart E, App. C).** Include copy of current accreditation. If an inspection report has been prepared by a consultant for the facility please include a copy with the notification.
- VII. **Approximate Amount of Asbestos, Including:** (1) Regulated asbestos containing material (RACM) to be removed (including nonfriable ACM to be sanded, ground, or abraded); (2) Category I ACM not removed; and (3) Category II ACM not removed. For both removals and demolition, enter the amount of RACM to be removed by entering a number in the appropriate box and an "X" for the unit. For demolition only, enter the amount of Category I and II nonfriable asbestos not to be removed in the appropriate boxes. Category I nonfriable material includes packing, gasket, resilient floor covering, and asphalt roofing materials containing more than one percent asbestos. Category II nonfriable material includes any material, excluding Category I products, containing more than one percent asbestos, that when dry, cannot be crumbled, pulverized, or reduced to powder. Facilities to be used for fire training purposes must have all materials containing more than one percent asbestos removed.
- VIII. **Scheduled Dates of Asbestos Removal:** Enter scheduled dates (month/day/year) for asbestos removal work. Asbestos removal work includes any activity, including site preparation, which may break up, dislodge, or disturb asbestos material. **These dates must be accurate.** Asbestos removal work occurring prior to the start date or after the end date is a violation and could result in substantial enforcement action. If these dates change, notify the District immediately, by submitting a revision request form.
- IX. **Scheduled Dates of Demo/Renovation:** Enter scheduled dates (month/day/year) for beginning and ending of the planned demolition or renovation. For fire training burns this is the time period when the actual fire training burn will take place. **These dates must be accurate.** Demolition or renovation activity occurring prior to the start date or after the end date is a violation and could result in substantial enforcement action. If these dates change, notify the District immediately, by submitting a revision request form.
- X. **Description of Planned Demolition or Renovation Work, and Method(s) to be Used:** Include here a description of the overall work being done and the techniques being used. A work plan can be attached to address this item.

- XI. Description of Engineering Controls and Work Practices to be Used to Control Emissions of Asbestos at the Demolition or Renovation Site: Describe the work practices and engineering controls selected to ensure compliance with the requirements of the regulation, including removal and waste handling emission control procedures. A work plan can be attached to address this item.
- XII. Waste Transporter(s): Enter the name, addresses, contact persons and telephone numbers of the persons or companies responsible for transporting ACM from the removal site to the waste disposal site. If the removal contractor or owner is the waste transporter, state "same as owner" or "same as removal contractor".
- XIII. Waste Disposal Site: Identify the waste disposal site, including the complete name, location, and telephone number of the facility. If ACM is to be disposed of at more than one site, provide complete information on an additional sheet submitted with the form.
- XIV. If Demolition Ordered by a Government Agency: Provide the name of the responsible official, title and agency, authority under which the order was issued, the dates of the order and the dates of the ordered demolition. Include a copy of the order with the notification.
- XV. Emergency Renovation Information: Provide the date and time of the emergency, a description of the event and a description of unsafe conditions, equipment damage or financial burden resulting from the event. The information should be detailed enough to evaluate whether a renovation falls within the emergency exception.
- XVI. Description of Procedures to be Followed in the Event that Unexpected Asbestos is Found or Previously Nonfriable Asbestos Material Becomes Crumbled, Pulverized, or Reduced to Powder: Provide adequate information to demonstrate that appropriate actions have been considered and can be implemented to control asbestos emissions adequately, including at a minimum, conformance with applicable work practice standards. Typically these will include a work stoppage, wetting of material, and notification to the District.
- XVII. Certification of Presence of Trained Supervisor: Certify that a person trained in asbestos removal procedures and the provisions of this regulation will be on-site and supervise the demolition or renovation. **When handling RACM, the supervisor must be a current AHERA-accredited contractor/supervisor, and the workers must be AHERA-accredited workers (40 CFR 763 Subpart E App. C).** The supervisor is responsible for the activity on-site. Evidence that the training has been completed by the supervisor must be available for inspection during normal business hours.
- XVIII. Verification: Please certify the accuracy and completeness of the information provided by signing and dating the notification form.

FEES AND OTHER REQUIREMENTS

Demolition - OR - Renovation Notifications 2 X
 Asbestos Abatement (with Demolition Projects) 4 X (Regulation IV, Rule 401, §1.1.2)

- All fees must accompany the notification form.
- Notification forms must be mailed or hand delivered to the District office; faxes are acceptable, if followed by the original within three (3) days.
- Notifications must be received or post-marked at least 10 business days prior to the start of demolition or renovation.
- Incomplete forms will be returned for correction. The 10 day clock does not start until a correctly completed notification is received by the District office.
- If a person cancels a notification, they may request a fee refund provided:
 1. the fee has been paid.
 2. the District has not performed an inspection.
 3. the request is in writing.
 4. and the request is made within ten days following cancellation.
- When a Fire Department receives a fee or donation from the property owner of a structure that is to be used for fire training purposes, the notification/inspection fee noted above shall be paid. Coordinated Burn Authorization Permits are required for Fire Department training burns; however they are exempt from the permit fees (Regulation II, Rule 201, 6.2).
- **Rule 401**
 §1.1.2 Where a demolition project includes the removal of Regulated Asbestos Containing Material from a facility prior to the wrecking of the structure, the removal is treated as a separate renovation project for the purposes of fees, although they may be included in a single notification. This requires a second \$200.00 fee.
- Any demolition or renovation project that requires physical barriers for the purpose of controlling asbestos emissions (containment) shall install transparent viewing ports which allow observation, to the extent possible, of all stripping and removal of regulated asbestos containing material from outside the containment area.

Questions on completing the asbestos demolition / notification form, or on the NESHAP regulations covering asbestos, can be directed to District staff at (707) 443-3093.

NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

NOTIFICATION OF DEMOLITION OR RENOVATION SUBJECT TO NESHAP's (40 CFR PART 61.145)

IMPORTANT: Notifications must be signed in ink. All numbered items must be addressed, regardless of applicability - e.g., enter N/A where numbered items don't apply to your project. Only originals accepted.

Operator Project #	Postmark	Date Received	Notification #	
I. TYPE OF NOTIFICATION Circle One: O = Original R = Revised C = Canceled				
II. FACILITY INFORMATION <i>(Identify owner, removal contractor and any other contractors)</i>				
OWNER NAME:				
Address:				
City:	State:	Zip:		
Contact:	Tel:			
ASBESTOS REMOVAL CONTRACTOR:			DOSH Reg #	
Address:				
City:	State:	Zip:		
Contact:	Tel:			
OTHER DEMOLITION OR RENOVATION OPERATOR:				
Address:				
City:	State:	Zip:		
Contact:	Tel:			
III. TYPE OF OPERATION Circle One: D = Demolition O = Ordered Demolition R = Renovation E = Emergency Renov.				
IV. IS ASBESTOS PRESENT Circle One: (Yes No)				
V. FACILITY DESCRIPTION <i>(Include building name, number and floor or room numbers)</i>				
Bldg. Name:				
Address:				
City:	State:	County:		
Site Location:				
Building Size:	# of Floors:	Age in Years:		
Present Use:		Prior Use:		
VI. PROCEDURE USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL <i>{An asbestos survey performed by a California "Certified Asbestos Consultant", is required to process this notification}</i>				
VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING: 1. Regulated ACM to be Removed 2. Category I ACM to be Removed 3. Category II ACM to be Removed				
	RACM To Be Removed	Nonfriable Asbestos Material To Be Removed		Indicate Unit of Measurement Below
		Category I	Category II	Units
Pipes				Ln Ft: Ln m:
Surface Area				Sq Ft: Sq m:
Vol. RACM Off Facility Component				Cu Ft: Cu m:
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY)		Start:	Complete	
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY)		Start:	Complete	
X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:				

NOTIFICATION OF DEMOLITION OR RENOVATION (continued)

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION OR RENOVATION SITE (attach work plan, if appropriate):

XII. WASTE TRANSPORTER #1

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Contact Person: _____ Tel: _____

WASTE TRANSPORTER #2

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Contact Person: _____ Tel: _____

XIII. WASTE DISPOSAL SITE

Name: _____ Tel: _____
 Address: _____
 City: _____ State: _____ Zip: _____

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY PLEASE IDENTIFY THE AGENCY BELOW (attach copy of demolition order):

Name: _____ Title: _____
 Authority: _____
 Date of Order (MM/DD/YY): _____ Date Ordered to Begin (mm/dd/yy): _____

XV. FOR EMERGENCY RENOVATIONS

Date and Hour of Emergency (mm/dd/yy): _____
 Description of the Sudden, Unexpected Event: _____
 Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden: _____

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND, OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES FRIABLE:

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING ALL ASBESTOS ABATEMENT, AND EVIDENCE THAT THE REQUIRED CERTIFICATION ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION BY REGULATING AUTHORITIES DURING NORMAL BUSINESS HOURS.

 (Print Name of Owner/Operator) _____ (Signature of Owner/Operator)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

 (Print Name of Owner/Operator) _____ (Signature of Owner/Operator)

Any owner or operator of a demolition or renovation project which is subject to 40 CFR-61, Subpart M (NESHAPS) for asbestos and is required to submit a written notification of the demolition/renovation to the District shall submit with the notification form the following fee:

- SINGLE DEMOLITION – OR – RENOVATION PROJECTS 2 X
- ASBESTOS ABATEMENT accompanying a demolition (Regulation IV, Rule 401, §1.1.2) 4 X

Fire Department training burns shall be exempted from the fees noted above.

APPENDIX C

Emissions Modeling

Lewiston WWTP - Proposed Project Trinity County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	5.30	1,000.00	0
Other Asphalt Surfaces	5.74	Acre	5.74	250,034.40	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	88
Climate Zone	3			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	546.6	CH4 Intensity (lb/MW hr)	0.025	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment

Land Use - 5.3 acres disturbed, 5.74 acres paved

Construction Phase - Construction schedule does not reflect overlapping activities.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Based on project-specific information.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

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Off-road Equipment - Based on project-specific information provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Trips and VMT - Construction vehicle trips based on model default of 2.5 employee trips/piece of equipment used. No vendor trips anticipated for this project. 2250 haul truck trips.

Demolition -

Grading - 9500 cy imported, 13000 cy exported. Acreage of disturbance based on model defaults/equipment use.

Vehicle Trips - Assumes one worker trip per day, model default: 15 miles/worker trip. One septage haul trip/year, 45 miles/haul trip.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Consumer Products - .

Area Coating - .

Landscape Equipment - Includes landscape maintenance

Energy Use - Energy use based on 0.32 MGD and default wastewater intensity factors.

Water And Wastewater - .

Solid Waste - .

Construction Off-road Equipment Mitigation - Watering=61% CE for graded areas 50% for roadways,

Operational Off-Road Equipment - Assumes one 500 hp diesel genset, 24 hours/day with a max limit of 200 hours/year.

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	300.00	3.00
tblConstructionPhase	NumDays	300.00	40.00
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tblConstructionPhase	NumDays	30.00	20.00

tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	3.00
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tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	2.39	0.00
tblEnergyUse	T24NG	17.92	0.00
tblGrading	AcresOfGrading	0.00	75.00
tblGrading	AcresOfGrading	5.00	50.00
tblGrading	MaterialExported	0.00	9,500.00
tblGrading	MaterialImported	0.00	13,000.00
tblLandUse	LotAcreage	0.02	5.30
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00

tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	500.00
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tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
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tblTripsAndVMT	VendorTripNumber	41.00	0.00
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tblTripsAndVMT	VendorTripNumber	41.00	0.00
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tblTripsAndVMT	WorkerTripNumber	105.00	5.00
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tblTripsAndVMT	WorkerTripNumber	105.00	5.00
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tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
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tblVehicleEF	HHD	3.7650e-003	6.3560e-003

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tblVehicleEF	HHD	72.92	104.38
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tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.02	0.05
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
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tblVehicleEF	HHD	3.4090e-003	4.1740e-003
tblVehicleEF	HHD	2.8400e-004	3.8400e-004
tblVehicleEF	HHD	0.32	0.63
tblVehicleEF	HHD	0.67	0.72
tblVehicleEF	HHD	1.6100e-004	2.1700e-004
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.30	2.30
tblVehicleEF	HHD	7.01	12.26

tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	1.73	3.04
tblVehicleEF	LDA	4.11	6.76
tblVehicleEF	LDA	308.84	365.15
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.18	0.30
tblVehicleEF	LDA	0.22	0.38
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.31	0.59
tblVehicleEF	LDA	4.1920e-003	4.2170e-003
tblVehicleEF	LDA	8.0800e-004	8.6400e-004
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.19
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.33	0.63
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	1.73	2.97
tblVehicleEF	LDA	2.89	4.82
tblVehicleEF	LDA	316.13	373.72
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.16	0.27
tblVehicleEF	LDA	0.19	0.34
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	0.10	0.15
tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.07	0.15
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.23	0.44
tblVehicleEF	LDA	4.2920e-003	4.3150e-003
tblVehicleEF	LDA	7.8700e-004	8.2800e-004
tblVehicleEF	LDA	0.10	0.15
tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.09	0.18
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.24	0.47
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	1.74	3.15
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tblVehicleEF	LDA	302.75	357.99
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.21	0.34
tblVehicleEF	LDA	0.24	0.42
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	3.4200e-003	4.3570e-003
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.40	0.77
tblVehicleEF	LDA	4.1100e-003	4.1370e-003
tblVehicleEF	LDA	8.3200e-004	9.0200e-004
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	3.4200e-003	4.3570e-003
tblVehicleEF	LDA	0.09	0.20
tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.43	0.82
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.62	10.21

tblVehicleEF	LDT1	11.52	17.62
tblVehicleEF	LDT1	369.79	431.77
tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.61	0.97
tblVehicleEF	LDT1	0.46	0.67
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.24	0.52
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.84	1.41
tblVehicleEF	LDT1	4.9280e-003	5.0210e-003
tblVehicleEF	LDT1	1.0650e-003	1.2040e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.28	0.59
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.90	1.51
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.50	9.72
tblVehicleEF	LDT1	8.06	12.47

tblVehicleEF	LDT1	377.71	440.53
tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.54	0.86
tblVehicleEF	LDT1	0.41	0.60
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.23	0.49
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.61	1.02
tblVehicleEF	LDT1	5.0310e-003	5.1130e-003
tblVehicleEF	LDT1	1.0040e-003	1.1110e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.28	0.55
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.66	1.09
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.82	10.85
tblVehicleEF	LDT1	15.28	23.23
tblVehicleEF	LDT1	363.16	424.44

tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.70	1.11
tblVehicleEF	LDT1	0.51	0.75
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
tblVehicleEF	LDT1	0.25	0.55
tblVehicleEF	LDT1	2.14	2.96
tblVehicleEF	LDT1	1.10	1.85
tblVehicleEF	LDT1	4.8420e-003	4.9490e-003
tblVehicleEF	LDT1	1.1320e-003	1.3060e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
tblVehicleEF	LDT1	0.29	0.63
tblVehicleEF	LDT1	2.14	2.96
tblVehicleEF	LDT1	1.18	1.98
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	2.64	4.53
tblVehicleEF	LDT2	6.30	10.16
tblVehicleEF	LDT2	455.75	520.33
tblVehicleEF	LDT2	83.05	94.45

tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.36	0.63
tblVehicleEF	LDT2	0.46	0.77
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
tblVehicleEF	LDT2	3.4870e-003	4.7210e-003
tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
tblVehicleEF	LDT2	0.09	0.12
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.11	0.22
tblVehicleEF	LDT2	0.97	1.37
tblVehicleEF	LDT2	0.47	0.84
tblVehicleEF	LDT2	5.7270e-003	5.7750e-003
tblVehicleEF	LDT2	1.1220e-003	1.1990e-003
tblVehicleEF	LDT2	0.09	0.12
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.14	0.26
tblVehicleEF	LDT2	0.97	1.37
tblVehicleEF	LDT2	0.51	0.90
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	2.63	4.44
tblVehicleEF	LDT2	4.42	7.19
tblVehicleEF	LDT2	466.16	532.01
tblVehicleEF	LDT2	83.05	94.45
tblVehicleEF	LDT2	0.17	0.00

tblVehicleEF	LDT2	0.32	0.56
tblVehicleEF	LDT2	0.41	0.69
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
tblVehicleEF	LDT2	3.4870e-003	4.7210e-003
tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
tblVehicleEF	LDT2	0.14	0.19
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.11	0.21
tblVehicleEF	LDT2	0.84	1.17
tblVehicleEF	LDT2	0.35	0.62
tblVehicleEF	LDT2	5.8580e-003	5.9020e-003
tblVehicleEF	LDT2	1.0890e-003	1.1450e-003
tblVehicleEF	LDT2	0.14	0.19
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.14	0.26
tblVehicleEF	LDT2	0.84	1.17
tblVehicleEF	LDT2	0.37	0.66
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	2.68	4.67
tblVehicleEF	LDT2	8.34	13.38
tblVehicleEF	LDT2	447.04	510.57
tblVehicleEF	LDT2	83.05	94.45
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.41	0.72

tblVehicleEF	LDT2	0.51	0.85
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
tblVehicleEF	LDT2	3.4870e-003	4.7210e-003
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tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
tblVehicleEF	LDT2	0.11	0.22
tblVehicleEF	LDT2	1.16	1.63
tblVehicleEF	LDT2	0.61	1.09
tblVehicleEF	LDT2	5.6180e-003	5.6700e-003
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tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
tblVehicleEF	LDT2	0.14	0.27
tblVehicleEF	LDT2	1.16	1.63
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tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
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tblVehicleEF	LHD1	7.57	9.64
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tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46

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tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.59	3.54
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tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
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tblVehicleEF	LHD1	0.01	0.01
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tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
tblVehicleEF	LHD1	0.33	0.46
tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.52	0.67
tblVehicleEF	LHD1	6.9090e-003	6.9510e-003
tblVehicleEF	LHD1	3.8600e-004	4.2000e-004
tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
tblVehicleEF	LHD1	0.37	0.51

tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.56	0.71
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	3.34	4.77
tblVehicleEF	LHD1	4.66	5.91
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.54	3.47
tblVehicleEF	LHD1	0.92	1.01
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
tblVehicleEF	LHD1	0.34	0.47
tblVehicleEF	LHD1	0.99	1.09
tblVehicleEF	LHD1	0.40	0.50
tblVehicleEF	LHD1	6.9110e-003	6.9530e-003
tblVehicleEF	LHD1	3.3700e-004	3.5600e-004
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
tblVehicleEF	LHD1	0.38	0.53
tblVehicleEF	LHD1	0.99	1.09
tblVehicleEF	LHD1	0.42	0.54
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	3.15	4.54
tblVehicleEF	LHD1	10.99	14.03
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.67	3.66
tblVehicleEF	LHD1	1.09	1.19
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
tblVehicleEF	LHD1	0.06	0.06

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.32	0.45
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.66	0.85
tblVehicleEF	LHD1	6.9070e-003	6.9490e-003
tblVehicleEF	LHD1	4.4400e-004	4.9500e-004
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.71	0.91
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11

tblVehicleEF	LHD2	1.35	2.20
tblVehicleEF	LHD2	1.91	3.09
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.81	3.62
tblVehicleEF	LHD2	0.37	0.40
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.14	0.25
tblVehicleEF	LHD2	5.8200e-003	5.8340e-003
tblVehicleEF	LHD2	1.5100e-004	1.8000e-004

tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.15	0.26
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.34	2.13
tblVehicleEF	LHD2	1.19	1.95
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.78	3.58
tblVehicleEF	LHD2	0.34	0.37
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003

tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	5.8200e-003	5.8330e-003
tblVehicleEF	LHD2	1.3800e-004	1.5900e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.36	2.27
tblVehicleEF	LHD2	2.76	4.45
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00

tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.88	3.72
tblVehicleEF	LHD2	0.40	0.43
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.21	0.30
tblVehicleEF	LHD2	0.18	0.33
tblVehicleEF	LHD2	5.8200e-003	5.8350e-003
tblVehicleEF	LHD2	1.6500e-004	2.0400e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.21	0.30

tblVehicleEF	LHD2	0.19	0.35
tblVehicleEF	MCY	23.69	27.46
tblVehicleEF	MCY	12.88	12.35
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.26	1.29
tblVehicleEF	MCY	0.33	0.33
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	2.75	2.94
tblVehicleEF	MCY	1.80	2.93
tblVehicleEF	MCY	2.67	2.87
tblVehicleEF	MCY	2.1150e-003	2.1120e-003
tblVehicleEF	MCY	7.2400e-004	7.5400e-004
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	3.01	3.21
tblVehicleEF	MCY	1.80	2.93

tblVehicleEF	MCY	2.87	3.09
tblVehicleEF	MCY	21.02	24.10
tblVehicleEF	MCY	9.56	9.43
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.15	1.18
tblVehicleEF	MCY	0.30	0.30
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.59	2.72
tblVehicleEF	MCY	1.56	2.62
tblVehicleEF	MCY	2.02	2.13
tblVehicleEF	MCY	2.0680e-003	2.0520e-003
tblVehicleEF	MCY	6.5100e-004	6.8500e-004
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.84	2.98
tblVehicleEF	MCY	1.56	2.62

tblVehicleEF	MCY	2.17	2.29
tblVehicleEF	MCY	26.64	31.19
tblVehicleEF	MCY	16.85	15.85
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.40	1.44
tblVehicleEF	MCY	0.36	0.37
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.94	3.18
tblVehicleEF	MCY	2.13	3.36
tblVehicleEF	MCY	3.43	3.73
tblVehicleEF	MCY	2.1670e-003	2.1780e-003
tblVehicleEF	MCY	8.1000e-004	8.3700e-004
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	3.20	3.46
tblVehicleEF	MCY	2.13	3.36

tblVehicleEF	MCY	3.68	4.01
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.03	7.22
tblVehicleEF	MDV	12.10	16.07
tblVehicleEF	MDV	606.15	677.35
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.87	1.22
tblVehicleEF	MDV	0.95	1.22
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.26	0.39
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.03	1.43
tblVehicleEF	MDV	7.2920e-003	7.2980e-003
tblVehicleEF	MDV	1.4880e-003	1.5550e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.10	1.53

tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	4.95	7.04
tblVehicleEF	MDV	8.55	11.37
tblVehicleEF	MDV	619.59	692.00
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.78	1.09
tblVehicleEF	MDV	0.85	1.09
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.77	1.06
tblVehicleEF	MDV	7.4520e-003	7.4510e-003
tblVehicleEF	MDV	1.4240e-003	1.4700e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.82	1.13
tblVehicleEF	MDV	0.05	0.07

tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.17	7.50
tblVehicleEF	MDV	15.96	21.17
tblVehicleEF	MDV	594.91	665.10
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	1.00	1.40
tblVehicleEF	MDV	1.05	1.35
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.26	0.40
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.33	1.85
tblVehicleEF	MDV	7.1590e-003	7.1720e-003
tblVehicleEF	MDV	1.5580e-003	1.6480e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.32	0.47
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.42	1.98
tblVehicleEF	MH	6.26	15.29
tblVehicleEF	MH	18.14	28.91

tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.15	3.03
tblVehicleEF	MH	1.26	1.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.23	0.53
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	0.94	1.76
tblVehicleEF	MH	7.5470e-003	7.7230e-003
tblVehicleEF	MH	6.3800e-004	8.7700e-004
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.27	0.60
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	1.01	1.88
tblVehicleEF	MH	6.40	15.00

tblVehicleEF	MH	10.25	16.26
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.04	2.87
tblVehicleEF	MH	1.16	1.51
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.24	0.52
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.63	1.11
tblVehicleEF	MH	7.5500e-003	7.7180e-003
tblVehicleEF	MH	5.0500e-004	6.5800e-004
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.28	0.60
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.67	1.19

tblVehicleEF	MH	6.12	15.61
tblVehicleEF	MH	27.75	44.47
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.30	3.28
tblVehicleEF	MH	1.37	1.79
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.22	0.54
tblVehicleEF	MH	3.20	3.85
tblVehicleEF	MH	1.31	2.53
tblVehicleEF	MH	7.5450e-003	7.7280e-003
tblVehicleEF	MH	8.0100e-004	1.1460e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.27	0.61
tblVehicleEF	MH	3.20	3.85

tblVehicleEF	MH	1.40	2.71
tblVehicleEF	MHD	8.9830e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	1.92	2.89
tblVehicleEF	MHD	1.25	3.64
tblVehicleEF	MHD	33.91	52.92
tblVehicleEF	MHD	580.81	572.46
tblVehicleEF	MHD	994.67	1,056.64
tblVehicleEF	MHD	54.15	79.06
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	6.40	7.97
tblVehicleEF	MHD	3.52	6.42
tblVehicleEF	MHD	1.70	2.16
tblVehicleEF	MHD	0.04	0.13
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.03	0.12
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
tblVehicleEF	MHD	0.17	0.44
tblVehicleEF	MHD	0.19	0.42
tblVehicleEF	MHD	1.4260e-003	2.5190e-003
tblVehicleEF	MHD	0.20	0.51
tblVehicleEF	MHD	0.91	1.87

tblVehicleEF	MHD	1.89	4.44
tblVehicleEF	MHD	5.9260e-003	5.5450e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.1700e-003	1.7730e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
tblVehicleEF	MHD	0.17	0.44
tblVehicleEF	MHD	0.22	0.48
tblVehicleEF	MHD	1.4260e-003	2.5190e-003
tblVehicleEF	MHD	0.23	0.57
tblVehicleEF	MHD	0.91	1.87
tblVehicleEF	MHD	2.03	4.77
tblVehicleEF	MHD	8.4650e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	1.39	2.10
tblVehicleEF	MHD	1.26	3.45
tblVehicleEF	MHD	18.53	32.16
tblVehicleEF	MHD	615.32	606.47
tblVehicleEF	MHD	994.67	1,056.64
tblVehicleEF	MHD	54.15	79.06
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	6.61	8.22
tblVehicleEF	MHD	3.47	6.33
tblVehicleEF	MHD	1.57	1.98
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01

tblVehicleEF	MHD	0.03	0.10
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	5.7770e-003	0.01
tblVehicleEF	MHD	0.16	0.42
tblVehicleEF	MHD	0.18	0.40
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.20	0.50
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.21	2.81
tblVehicleEF	MHD	6.2780e-003	5.8740e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.0700e-004	1.3950e-003
tblVehicleEF	MHD	5.7770e-003	0.01
tblVehicleEF	MHD	0.16	0.42
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.23	0.57
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.29	3.02
tblVehicleEF	MHD	9.6970e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	2.64	3.98
tblVehicleEF	MHD	1.25	3.87
tblVehicleEF	MHD	52.70	78.32
tblVehicleEF	MHD	533.16	525.49
tblVehicleEF	MHD	994.67	1,056.64

tblVehicleEF	MHD	54.15	79.06
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	6.12	7.61
tblVehicleEF	MHD	3.62	6.60
tblVehicleEF	MHD	1.85	2.35
tblVehicleEF	MHD	0.04	0.16
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.04	0.14
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
tblVehicleEF	MHD	0.18	0.49
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	1.6400e-004	2.3800e-004
tblVehicleEF	MHD	0.20	0.51
tblVehicleEF	MHD	0.98	2.01
tblVehicleEF	MHD	2.71	6.36
tblVehicleEF	MHD	5.4400e-003	5.0900e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.4910e-003	2.2330e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
tblVehicleEF	MHD	0.18	0.49
tblVehicleEF	MHD	0.24	0.52
tblVehicleEF	MHD	1.6400e-004	2.3800e-004

tblVehicleEF	MHD	0.23	0.58
tblVehicleEF	MHD	0.98	2.01
tblVehicleEF	MHD	2.90	6.84
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.48	2.30
tblVehicleEF	OBUS	2.27	10.41
tblVehicleEF	OBUS	15.03	27.71
tblVehicleEF	OBUS	554.85	573.90
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.30	7.28
tblVehicleEF	OBUS	1.05	1.89
tblVehicleEF	OBUS	1.76	1.98
tblVehicleEF	OBUS	0.01	0.06
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	9.4330e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
tblVehicleEF	OBUS	0.42	0.49
tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.13	0.50
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.80	3.61
tblVehicleEF	OBUS	5.6610e-003	5.5590e-003

tblVehicleEF	OBUS	6.8790e-003	7.0190e-003
tblVehicleEF	OBUS	6.2400e-004	1.2250e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
tblVehicleEF	OBUS	0.48	0.56
tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.16	0.56
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.85	3.89
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	1.80	1.67
tblVehicleEF	OBUS	2.35	9.38
tblVehicleEF	OBUS	9.48	22.10
tblVehicleEF	OBUS	587.81	607.99
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.47	7.51
tblVehicleEF	OBUS	0.97	1.74
tblVehicleEF	OBUS	1.62	1.81
tblVehicleEF	OBUS	8.6440e-003	0.05
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	7.9520e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	7.8400e-004	3.3110e-003
tblVehicleEF	OBUS	0.02	0.11

tblVehicleEF	OBUS	0.40	0.46
tblVehicleEF	OBUS	4.0000e-004	1.3380e-003
tblVehicleEF	OBUS	0.14	0.47
tblVehicleEF	OBUS	0.29	0.83
tblVehicleEF	OBUS	0.62	2.42
tblVehicleEF	OBUS	5.9980e-003	5.8890e-003
tblVehicleEF	OBUS	6.8810e-003	7.0020e-003
tblVehicleEF	OBUS	5.3100e-004	1.0990e-003
tblVehicleEF	OBUS	7.8400e-004	3.3110e-003
tblVehicleEF	OBUS	0.02	0.11
tblVehicleEF	OBUS	0.45	0.53
tblVehicleEF	OBUS	4.0000e-004	1.3380e-003
tblVehicleEF	OBUS	0.17	0.53
tblVehicleEF	OBUS	0.29	0.83
tblVehicleEF	OBUS	0.66	2.61
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	3.41	3.17
tblVehicleEF	OBUS	2.18	11.57
tblVehicleEF	OBUS	21.60	34.32
tblVehicleEF	OBUS	509.32	526.81
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.06	6.96
tblVehicleEF	OBUS	1.16	2.09
tblVehicleEF	OBUS	1.91	2.15
tblVehicleEF	OBUS	0.01	0.07
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003

tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	0.01	0.07
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	7.3000e-005	1.0800e-004
tblVehicleEF	OBUS	0.02	0.13
tblVehicleEF	OBUS	0.46	0.53
tblVehicleEF	OBUS	4.1000e-005	6.1000e-005
tblVehicleEF	OBUS	0.13	0.53
tblVehicleEF	OBUS	0.34	0.93
tblVehicleEF	OBUS	1.00	4.98
tblVehicleEF	OBUS	5.1970e-003	5.1030e-003
tblVehicleEF	OBUS	6.8780e-003	7.0380e-003
tblVehicleEF	OBUS	7.3400e-004	1.3730e-003
tblVehicleEF	OBUS	7.3000e-005	1.0800e-004
tblVehicleEF	OBUS	0.02	0.13
tblVehicleEF	OBUS	0.52	0.60
tblVehicleEF	OBUS	4.1000e-005	6.1000e-005
tblVehicleEF	OBUS	0.16	0.59
tblVehicleEF	OBUS	0.34	0.93
tblVehicleEF	OBUS	1.07	5.37
tblVehicleEF	SBUS	4.3220e-003	5.3980e-003
tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
tblVehicleEF	SBUS	0.99	1.04
tblVehicleEF	SBUS	9.01	10.47
tblVehicleEF	SBUS	119.14	131.09
tblVehicleEF	SBUS	563.29	581.72
tblVehicleEF	SBUS	1,108.20	1,167.79

tblVehicleEF	SBUS	119.79	126.19
tblVehicleEF	SBUS	1.3900e-003	0.00
tblVehicleEF	SBUS	7.75	8.19
tblVehicleEF	SBUS	8.46	9.43
tblVehicleEF	SBUS	3.65	3.96
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.61	0.60
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.26	0.26
tblVehicleEF	SBUS	2.8030e-003	2.7950e-003
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	0.46	0.53
tblVehicleEF	SBUS	0.09	0.12
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.90	1.02
tblVehicleEF	SBUS	4.29	4.81
tblVehicleEF	SBUS	5.78	6.32
tblVehicleEF	SBUS	5.7480e-003	5.6340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	3.3310e-003	3.5360e-003
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	0.46	0.53
tblVehicleEF	SBUS	0.11	0.13

tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.97	1.11
tblVehicleEF	SBUS	4.29	4.81
tblVehicleEF	SBUS	6.18	6.75
tblVehicleEF	SBUS	4.0730e-003	5.0870e-003
tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
tblVehicleEF	SBUS	0.72	0.76
tblVehicleEF	SBUS	9.47	11.00
tblVehicleEF	SBUS	74.07	81.25
tblVehicleEF	SBUS	596.75	616.28
tblVehicleEF	SBUS	1,108.20	1,167.79
tblVehicleEF	SBUS	119.79	126.19
tblVehicleEF	SBUS	1.3900e-003	0.00
tblVehicleEF	SBUS	8.00	8.46
tblVehicleEF	SBUS	8.30	9.25
tblVehicleEF	SBUS	3.41	3.70
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.61	0.60
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.26	0.26
tblVehicleEF	SBUS	2.8030e-003	2.7950e-003
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	0.42	0.48

tblVehicleEF	SBUS	0.09	0.11
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.95	1.09
tblVehicleEF	SBUS	3.80	4.27
tblVehicleEF	SBUS	3.96	4.30
tblVehicleEF	SBUS	6.0890e-003	5.9690e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	2.5660e-003	2.6900e-003
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	0.42	0.48
tblVehicleEF	SBUS	0.10	0.12
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	1.03	1.17
tblVehicleEF	SBUS	3.80	4.27
tblVehicleEF	SBUS	4.22	4.59
tblVehicleEF	SBUS	4.6660e-003	5.8270e-003
tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
tblVehicleEF	SBUS	1.37	1.44
tblVehicleEF	SBUS	8.49	9.88
tblVehicleEF	SBUS	182.18	200.81
tblVehicleEF	SBUS	517.07	533.99
tblVehicleEF	SBUS	1,108.20	1,167.79
tblVehicleEF	SBUS	119.79	126.19
tblVehicleEF	SBUS	1.3900e-003	0.00
tblVehicleEF	SBUS	7.40	7.83
tblVehicleEF	SBUS	8.75	9.75
tblVehicleEF	SBUS	3.95	4.29
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	0.61	0.60
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.26	0.26
tblVehicleEF	SBUS	2.8030e-003	2.7950e-003
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.5770e-003	5.5960e-003
tblVehicleEF	SBUS	0.53	0.61
tblVehicleEF	SBUS	0.10	0.13
tblVehicleEF	SBUS	3.1710e-003	3.1820e-003
tblVehicleEF	SBUS	0.83	0.95
tblVehicleEF	SBUS	4.97	5.58
tblVehicleEF	SBUS	8.29	9.09
tblVehicleEF	SBUS	5.2760e-003	5.1720e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.4000e-003	4.7180e-003
tblVehicleEF	SBUS	5.5770e-003	5.5960e-003
tblVehicleEF	SBUS	0.53	0.61
tblVehicleEF	SBUS	0.11	0.14
tblVehicleEF	SBUS	3.1710e-003	3.1820e-003
tblVehicleEF	SBUS	0.90	1.03
tblVehicleEF	SBUS	4.97	5.58
tblVehicleEF	SBUS	8.85	9.71
tblVehicleEF	UBUS	39.79	40.77
tblVehicleEF	UBUS	216.66	223.14

tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00
tblVehicleEF	UBUS	13.18	13.61
tblVehicleEF	UBUS	20.35	20.76
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	2.85	2.91
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	10.79	11.10
tblVehicleEF	UBUS	8.1450e-003	8.1620e-003
tblVehicleEF	UBUS	5.2290e-003	5.3400e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	3.09	3.17
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	11.52	11.85
tblVehicleEF	UBUS	41.16	42.17
tblVehicleEF	UBUS	155.01	159.65
tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00

tblVehicleEF	UBUS	12.24	12.64
tblVehicleEF	UBUS	18.75	19.13
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	2.95	3.02
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.01	9.26
tblVehicleEF	UBUS	8.1690e-003	8.1880e-003
tblVehicleEF	UBUS	4.2050e-003	4.2860e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	3.20	3.28
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.62	9.89
tblVehicleEF	UBUS	38.32	39.25
tblVehicleEF	UBUS	289.36	298.01
tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00
tblVehicleEF	UBUS	14.52	14.99
tblVehicleEF	UBUS	22.11	22.55
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003

tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.74	2.80
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	12.81	13.17
tblVehicleEF	UBUS	8.1180e-003	8.1350e-003
tblVehicleEF	UBUS	6.4330e-003	6.5810e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.97	3.05
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	13.67	14.06
tblVehicleTrips	CC_TL	6.60	15.00
tblVehicleTrips	CC_TL	6.60	45.00
tblVehicleTrips	CC_TTP	28.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00

tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	1.00
tblVehicleTrips	WD_TR	0.00	1.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	231,250.00	320,000.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	1.2713	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000						1.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Mobile	0.0338	0.3749	0.3641	8.2000e-004	0.0275	8.1900e-003	0.0357	7.4500e-003	7.5300e-003	0.0150						74.0503
Offroad	0.0165	0.1809	0.0805	3.9000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003						40.4003
Waste						0.0000	0.0000		0.0000	0.0000						0.0000
Water						0.0000	0.0000		0.0000	0.0000						0.3498
Total	1.3217	0.5557	0.4447	1.2100e-003	0.0275	0.0136	0.0411	7.4500e-003	0.0129	0.0204						114.8005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.25	32.55	18.10	32.23	0.00	39.74	13.14	0.00	41.76	26.50	0.00	0.00	0.00	0.00	0.00	35.19

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	1/1/2017	1/27/2017	5	20	Demolition
2	Grading & Site Work	Grading	1/28/2017	2/24/2017	5	20	Grading & Site Work
3	Concrete & Form Work	Building Construction	2/25/2017	4/7/2017	5	30	Concrete & Form Work
4	Equipment Installation	Building Construction	4/8/2017	4/12/2017	5	3	Equipment Installation
5	Building Construction	Building Construction	4/13/2017	6/7/2017	5	40	Building Construction
6	Site Piping & Electrical	Building Construction	6/8/2017	7/5/2017	5	20	Site Piping & Electrical
7	Final Grading & Paving	Paving	7/6/2017	7/10/2017	5	3	Final Grading & Paving
8	Grading & Site Work at ERB and Sludge Beds	Grading	7/11/2017	8/7/2017	5	20	Grading & Site Work at ERB and Sludge Beds

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 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Excavators	1	2.00	162	0.38
Grading & Site Work	Graders	0	8.00	174	0.41
Grading & Site Work	Plate Compactors	1	2.00	8	0.43
Grading & Site Work	Rollers	1	2.00	80	0.38
Grading & Site Work	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Scrapers	0	8.00	361	0.48
Grading & Site Work	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Concrete & Form Work	Cement and Mortar Mixers	1	6.00	9	0.56
Concrete & Form Work	Cranes	0	7.00	226	0.29
Concrete & Form Work	Forklifts	1	4.00	89	0.20
Concrete & Form Work	Generator Sets	0	8.00	84	0.74
Concrete & Form Work	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete & Form Work	Welders	0	8.00	46	0.45
Equipment Installation	Cranes	1	4.00	226	0.29
Equipment Installation	Forklifts	1	4.00	89	0.20
Equipment Installation	Generator Sets	0	8.00	84	0.74
Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Equipment Installation	Welders	0	8.00	46	0.45
Building Construction	Cranes	0	7.00	226	0.29
Building Construction	Forklifts	1	4.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Site Piping & Electrical	Cranes	0	7.00	226	0.29
Site Piping & Electrical	Forklifts	1	2.00	89	0.20
Site Piping & Electrical	Generator Sets	0	8.00	84	0.74
Site Piping & Electrical	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Site Piping & Electrical	Welders	0	8.00	46	0.45
Final Grading & Paving	Graders	1	3.00	174	0.41
Final Grading & Paving	Pavers	1	4.00	125	0.42
Final Grading & Paving	Paving Equipment	0	8.00	130	0.36
Final Grading & Paving	Rollers	1	2.00	80	0.38
Final Grading & Paving	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Grading & Site Work at ERB and Sludge Beds	Excavators	1	2.00	162	0.38

Grading & Site Work at ERB and Sludge Beds	Graders	1	4.00	174	0.41
Grading & Site Work at ERB and Sludge Beds	Plate Compactors	1	2.00	8	0.43
Grading & Site Work at ERB and Sludge Beds	Rubber Tired Dozers	1	4.00	255	0.40
Grading & Site Work at ERB and Sludge Beds	Scrapers	0	8.00	361	0.48
Grading & Site Work at ERB and Sludge Beds	Tractors/Loaders/Backhoes	1	2.00	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
Demolition	1	3.00	0.00	1.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Concrete & Form Work	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Equipment Installation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Piping & Electrical	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Final Grading & Paving	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work at ERB and Sludge Beds	5	13.00	0.00	2,250.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.9 Grading & Site Work at ERB and Sludge Beds - 2017

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					0.0226	0.0000	0.0226	7.6500e-003	0.0000	7.6500e-003						0.0000
Off-Road	0.0125	0.1325	0.0890	1.0000e-004		6.8600e-003	6.8600e-003		6.3200e-003	6.3200e-003						9.1053
Total	0.0125	0.1325	0.0890	1.0000e-004	0.0226	6.8600e-003	0.0294	7.6500e-003	6.3200e-003	0.0140						9.1053

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	0.0292	0.3041	0.3773	8.4000e-004	0.0187	4.4200e-003	0.0231	5.1300e-003	4.0600e-003	9.1900e-003						75.2139
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.3100e-003	1.9300e-003	0.0185	2.0000e-005	1.5700e-003	3.0000e-005	1.6000e-003	4.2000e-004	2.0000e-005	4.4000e-004						1.6684
Total	0.0305	0.3060	0.3957	8.6000e-004	0.0202	4.4500e-003	0.0247	5.5500e-003	4.0800e-003	9.6300e-003						76.8823

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	0.0338	0.3749	0.3641	8.2000e-004	0.0275	8.1900e-003	0.0357	7.4500e-003	7.5300e-003	0.0150						74.0503
Unmitigated	0.0338	0.3749	0.3641	8.2000e-004	0.0275	8.1900e-003	0.0357	7.4500e-003	7.5300e-003	0.0150						74.0503

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,900	3,900
Other Asphalt Surfaces	5.74	0.00	0.00	67,158	67,158
Total	6.74	0.00	0.00	71,058	71,058

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	0.00	15.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	45.00	0.00	0.00	100.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000

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
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0				0.0000
Other Asphalt Surfaces	0				0.0000
Total					0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0				0.0000
Other Asphalt Surfaces	0				0.0000
Total					0.0000

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	1.2713	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000							1.3000e-004
Unmitigated	1.2713	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000							1.3000e-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	tons/yr										MT/yr						
Architectural Coating	0.2909					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.9804					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000							1.3000e-004
Total	1.2713	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000							1.3000e-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	tons/yr										MT/yr					
Architectural Coating	0.2909					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.9804					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000						1.3000e-004
Total	1.2713	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000						1.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				0.3498
Unmitigated				0.3499

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.32 / 0				0.3499
Other Asphalt Surfaces	0 / 0				0.0000
Total					0.3499

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.32 / 0				0.3498
Other Asphalt Surfaces	0 / 0				0.0000
Total					0.3498

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				0.0000
Unmitigated				0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0				0.0000
Other Asphalt Surfaces	0				0.0000
Total					0.0000

10.0 Vegetation

Lewiston WWTP - Proposed Project

Trinity 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	5.30	1,000.00	0
Other Asphalt Surfaces	5.74	Acre	5.74	250,034.40	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	88
Climate Zone	3			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	546.6	CH4 Intensity (lb/MW hr)	0.025	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment

Land Use - 5.3 acres disturbed, 5.74 acres paved

Construction Phase - Construction schedule does not reflect overlapping activities.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Based on project-specific information.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

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Off-road Equipment - Based on project-specific information provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Trips and VMT - Construction vehicle trips based on model default of 2.5 employee trips/piece of equipment used. No vendor trips anticipated for this project. 2250 haul truck trips.

Demolition -

Grading - 9500 cy imported, 13000 cy exported. Acreage of disturbance based on model defaults/equipment use.

Vehicle Trips - Assumes one worker trip per day, model default: 15 miles/worker trip. One septage haul trip/year, 45 miles/haul trip.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Consumer Products - .

Area Coating - .

Landscape Equipment - Includes landscape maintenance

Energy Use - Energy use based on 0.32 MGD and default wastewater intensity factors.

Water And Wastewater - .

Solid Waste - .

Construction Off-road Equipment Mitigation - Watering=61% CE for graded areas 50% for roadways,

Operational Off-Road Equipment - Assumes one 500 hp diesel genset, 24 hours/day with a max limit of 200 hours/year.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	30.00
tblConstructionPhase	NumDays	300.00	3.00
tblConstructionPhase	NumDays	300.00	40.00
tblConstructionPhase	NumDays	300.00	20.00
tblConstructionPhase	NumDays	30.00	20.00

tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	3.00
tblEnergyUse	LightingElect	3.11	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	2.39	0.00
tblEnergyUse	T24NG	17.92	0.00
tblGrading	AcresOfGrading	0.00	75.00
tblGrading	AcresOfGrading	5.00	50.00
tblGrading	MaterialExported	0.00	9,500.00
tblGrading	MaterialImported	0.00	13,000.00
tblLandUse	LotAcreage	0.02	5.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
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tblOffRoadEquipment	UsageHours	8.00	2.00
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tblOffRoadEquipment	UsageHours	8.00	4.00
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tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00

tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	500.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	546.6
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblTripsAndVMT	HaulingTripNumber	2,813.00	2,250.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	3.02	2.90
tblVehicleEF	HHD	1.67	2.63
tblVehicleEF	HHD	113.32	137.88

tblVehicleEF	HHD	548.09	574.65
tblVehicleEF	HHD	1,606.12	1,702.12
tblVehicleEF	HHD	72.92	104.38
tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.46	6.01
tblVehicleEF	HHD	5.18	9.02
tblVehicleEF	HHD	4.09	4.07
tblVehicleEF	HHD	0.02	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01
tblVehicleEF	HHD	3.7650e-003	6.3560e-003
tblVehicleEF	HHD	0.28	0.55
tblVehicleEF	HHD	0.55	0.59
tblVehicleEF	HHD	1.5630e-003	2.5060e-003
tblVehicleEF	HHD	0.23	0.38
tblVehicleEF	HHD	1.21	2.15
tblVehicleEF	HHD	4.67	8.07
tblVehicleEF	HHD	5.5930e-003	5.5660e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.7050e-003	3.4790e-003
tblVehicleEF	HHD	3.7650e-003	6.3560e-003

tblVehicleEF	HHD	0.28	0.55
tblVehicleEF	HHD	0.62	0.67
tblVehicleEF	HHD	1.5630e-003	2.5060e-003
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tblVehicleEF	HHD	1.21	2.15
tblVehicleEF	HHD	5.02	8.70
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	0.01	0.02
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tblVehicleEF	HHD	1.66	2.58
tblVehicleEF	HHD	78.77	106.32
tblVehicleEF	HHD	580.65	608.79
tblVehicleEF	HHD	1,606.12	1,702.12
tblVehicleEF	HHD	72.92	104.38
tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.60	6.20
tblVehicleEF	HHD	5.13	8.94
tblVehicleEF	HHD	3.74	3.71
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01

tblVehicleEF	HHD	6.1630e-003	0.01
tblVehicleEF	HHD	0.27	0.53
tblVehicleEF	HHD	0.52	0.55
tblVehicleEF	HHD	3.2860e-003	5.3130e-003
tblVehicleEF	HHD	0.23	0.38
tblVehicleEF	HHD	1.15	2.03
tblVehicleEF	HHD	3.08	5.25
tblVehicleEF	HHD	5.9250e-003	5.8970e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.1130e-003	2.8940e-003
tblVehicleEF	HHD	6.1630e-003	0.01
tblVehicleEF	HHD	0.27	0.53
tblVehicleEF	HHD	0.59	0.63
tblVehicleEF	HHD	3.2860e-003	5.3130e-003
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.15	2.03
tblVehicleEF	HHD	3.32	5.66
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	4.15	3.99
tblVehicleEF	HHD	1.67	2.68
tblVehicleEF	HHD	154.40	175.43
tblVehicleEF	HHD	503.12	527.51
tblVehicleEF	HHD	1,606.12	1,702.12
tblVehicleEF	HHD	72.92	104.38
tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.26	5.74
tblVehicleEF	HHD	5.31	9.24

tblVehicleEF	HHD	4.46	4.46
tblVehicleEF	HHD	0.02	0.05
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.02	0.05
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01
tblVehicleEF	HHD	2.8400e-004	3.8400e-004
tblVehicleEF	HHD	0.32	0.63
tblVehicleEF	HHD	0.59	0.63
tblVehicleEF	HHD	1.6100e-004	2.1700e-004
tblVehicleEF	HHD	0.23	0.39
tblVehicleEF	HHD	1.30	2.30
tblVehicleEF	HHD	6.52	11.37
tblVehicleEF	HHD	5.1340e-003	5.1090e-003
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tblVehicleEF	HHD	3.4090e-003	4.1740e-003
tblVehicleEF	HHD	2.8400e-004	3.8400e-004
tblVehicleEF	HHD	0.32	0.63
tblVehicleEF	HHD	0.67	0.72
tblVehicleEF	HHD	1.6100e-004	2.1700e-004
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.30	2.30
tblVehicleEF	HHD	7.01	12.26

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tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	1.73	3.04
tblVehicleEF	LDA	4.11	6.76
tblVehicleEF	LDA	308.84	365.15
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.18	0.30
tblVehicleEF	LDA	0.22	0.38
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.31	0.59
tblVehicleEF	LDA	4.1920e-003	4.2170e-003
tblVehicleEF	LDA	8.0800e-004	8.6400e-004
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.19
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.33	0.63
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	1.73	2.97
tblVehicleEF	LDA	2.89	4.82
tblVehicleEF	LDA	316.13	373.72
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tblVehicleEF	LDA	0.16	0.27
tblVehicleEF	LDA	0.19	0.34
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	0.10	0.15
tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.07	0.15
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.23	0.44
tblVehicleEF	LDA	4.2920e-003	4.3150e-003
tblVehicleEF	LDA	7.8700e-004	8.2800e-004
tblVehicleEF	LDA	0.10	0.15
tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.09	0.18
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.24	0.47
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	1.74	3.15
tblVehicleEF	LDA	5.44	8.85
tblVehicleEF	LDA	302.75	357.99
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.21	0.34
tblVehicleEF	LDA	0.24	0.42
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	3.4200e-003	4.3570e-003
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.40	0.77
tblVehicleEF	LDA	4.1100e-003	4.1370e-003
tblVehicleEF	LDA	8.3200e-004	9.0200e-004
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	3.4200e-003	4.3570e-003
tblVehicleEF	LDA	0.09	0.20
tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.43	0.82
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tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.62	10.21

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tblVehicleEF	LDT1	369.79	431.77
tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.61	0.97
tblVehicleEF	LDT1	0.46	0.67
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.24	0.52
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.84	1.41
tblVehicleEF	LDT1	4.9280e-003	5.0210e-003
tblVehicleEF	LDT1	1.0650e-003	1.2040e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.28	0.59
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.90	1.51
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.50	9.72
tblVehicleEF	LDT1	8.06	12.47

tblVehicleEF	LDT1	377.71	440.53
tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.54	0.86
tblVehicleEF	LDT1	0.41	0.60
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.23	0.49
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.61	1.02
tblVehicleEF	LDT1	5.0310e-003	5.1130e-003
tblVehicleEF	LDT1	1.0040e-003	1.1110e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.28	0.55
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.66	1.09
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.82	10.85
tblVehicleEF	LDT1	15.28	23.23
tblVehicleEF	LDT1	363.16	424.44

tblVehicleEF	LDT1	68.49	81.41
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.70	1.11
tblVehicleEF	LDT1	0.51	0.75
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
tblVehicleEF	LDT1	0.25	0.55
tblVehicleEF	LDT1	2.14	2.96
tblVehicleEF	LDT1	1.10	1.85
tblVehicleEF	LDT1	4.8420e-003	4.9490e-003
tblVehicleEF	LDT1	1.1320e-003	1.3060e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
tblVehicleEF	LDT1	0.29	0.63
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tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	2.64	4.53
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tblVehicleEF	LDT2	83.05	94.45

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tblVehicleEF	LDT2	0.46	0.77
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
tblVehicleEF	LDT2	3.4870e-003	4.7210e-003
tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
tblVehicleEF	LDT2	0.09	0.12
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.11	0.22
tblVehicleEF	LDT2	0.97	1.37
tblVehicleEF	LDT2	0.47	0.84
tblVehicleEF	LDT2	5.7270e-003	5.7750e-003
tblVehicleEF	LDT2	1.1220e-003	1.1990e-003
tblVehicleEF	LDT2	0.09	0.12
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tblVehicleEF	LDT2	0.03	0.04
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tblVehicleEF	LDT2	83.05	94.45
tblVehicleEF	LDT2	0.17	0.00

tblVehicleEF	LDT2	0.32	0.56
tblVehicleEF	LDT2	0.41	0.69
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
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tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
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tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.11	0.21
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tblVehicleEF	LDT2	0.35	0.62
tblVehicleEF	LDT2	5.8580e-003	5.9020e-003
tblVehicleEF	LDT2	1.0890e-003	1.1450e-003
tblVehicleEF	LDT2	0.14	0.19
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.14	0.26
tblVehicleEF	LDT2	0.84	1.17
tblVehicleEF	LDT2	0.37	0.66
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.03	0.05
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tblVehicleEF	LDT2	8.34	13.38
tblVehicleEF	LDT2	447.04	510.57
tblVehicleEF	LDT2	83.05	94.45
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.41	0.72

tblVehicleEF	LDT2	0.51	0.85
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
tblVehicleEF	LDT2	3.4870e-003	4.7210e-003
tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
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tblVehicleEF	LDT2	1.16	1.63
tblVehicleEF	LDT2	0.61	1.09
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tblVehicleEF	LDT2	1.1580e-003	1.2570e-003
tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
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tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
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tblVehicleEF	LHD1	0.03	0.04
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tblVehicleEF	LHD1	7.57	9.64
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46

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tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.59	3.54
tblVehicleEF	LHD1	1.00	1.10
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
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tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
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tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
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tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
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tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
tblVehicleEF	LHD1	0.33	0.46
tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.52	0.67
tblVehicleEF	LHD1	6.9090e-003	6.9510e-003
tblVehicleEF	LHD1	3.8600e-004	4.2000e-004
tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
tblVehicleEF	LHD1	0.37	0.51

tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.56	0.71
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
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tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
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tblVehicleEF	LHD1	4.66	5.91
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.54	3.47
tblVehicleEF	LHD1	0.92	1.01
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
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tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
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tblVehicleEF	LHD1	6.9110e-003	6.9530e-003
tblVehicleEF	LHD1	3.3700e-004	3.5600e-004
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
tblVehicleEF	LHD1	0.38	0.53
tblVehicleEF	LHD1	0.99	1.09
tblVehicleEF	LHD1	0.42	0.54
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	3.15	4.54
tblVehicleEF	LHD1	10.99	14.03
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.67	3.66
tblVehicleEF	LHD1	1.09	1.19
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
tblVehicleEF	LHD1	0.06	0.06

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.32	0.45
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.66	0.85
tblVehicleEF	LHD1	6.9070e-003	6.9490e-003
tblVehicleEF	LHD1	4.4400e-004	4.9500e-004
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.71	0.91
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11

tblVehicleEF	LHD2	1.35	2.20
tblVehicleEF	LHD2	1.91	3.09
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.81	3.62
tblVehicleEF	LHD2	0.37	0.40
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.14	0.25
tblVehicleEF	LHD2	5.8200e-003	5.8340e-003
tblVehicleEF	LHD2	1.5100e-004	1.8000e-004

tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.15	0.26
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.34	2.13
tblVehicleEF	LHD2	1.19	1.95
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.78	3.58
tblVehicleEF	LHD2	0.34	0.37
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003

tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	5.8200e-003	5.8330e-003
tblVehicleEF	LHD2	1.3800e-004	1.5900e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.36	2.27
tblVehicleEF	LHD2	2.76	4.45
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00

tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.88	3.72
tblVehicleEF	LHD2	0.40	0.43
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.21	0.30
tblVehicleEF	LHD2	0.18	0.33
tblVehicleEF	LHD2	5.8200e-003	5.8350e-003
tblVehicleEF	LHD2	1.6500e-004	2.0400e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.21	0.30

tblVehicleEF	LHD2	0.19	0.35
tblVehicleEF	MCY	23.69	27.46
tblVehicleEF	MCY	12.88	12.35
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.26	1.29
tblVehicleEF	MCY	0.33	0.33
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	2.75	2.94
tblVehicleEF	MCY	1.80	2.93
tblVehicleEF	MCY	2.67	2.87
tblVehicleEF	MCY	2.1150e-003	2.1120e-003
tblVehicleEF	MCY	7.2400e-004	7.5400e-004
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	3.01	3.21
tblVehicleEF	MCY	1.80	2.93

tblVehicleEF	MCY	2.87	3.09
tblVehicleEF	MCY	21.02	24.10
tblVehicleEF	MCY	9.56	9.43
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.15	1.18
tblVehicleEF	MCY	0.30	0.30
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.59	2.72
tblVehicleEF	MCY	1.56	2.62
tblVehicleEF	MCY	2.02	2.13
tblVehicleEF	MCY	2.0680e-003	2.0520e-003
tblVehicleEF	MCY	6.5100e-004	6.8500e-004
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.84	2.98
tblVehicleEF	MCY	1.56	2.62

tblVehicleEF	MCY	2.17	2.29
tblVehicleEF	MCY	26.64	31.19
tblVehicleEF	MCY	16.85	15.85
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.40	1.44
tblVehicleEF	MCY	0.36	0.37
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.94	3.18
tblVehicleEF	MCY	2.13	3.36
tblVehicleEF	MCY	3.43	3.73
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tblVehicleEF	MCY	8.1000e-004	8.3700e-004
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	3.20	3.46
tblVehicleEF	MCY	2.13	3.36

tblVehicleEF	MCY	3.68	4.01
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.03	7.22
tblVehicleEF	MDV	12.10	16.07
tblVehicleEF	MDV	606.15	677.35
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.87	1.22
tblVehicleEF	MDV	0.95	1.22
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.26	0.39
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.03	1.43
tblVehicleEF	MDV	7.2920e-003	7.2980e-003
tblVehicleEF	MDV	1.4880e-003	1.5550e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.10	1.53

tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	4.95	7.04
tblVehicleEF	MDV	8.55	11.37
tblVehicleEF	MDV	619.59	692.00
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.78	1.09
tblVehicleEF	MDV	0.85	1.09
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.77	1.06
tblVehicleEF	MDV	7.4520e-003	7.4510e-003
tblVehicleEF	MDV	1.4240e-003	1.4700e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.82	1.13
tblVehicleEF	MDV	0.05	0.07

tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.17	7.50
tblVehicleEF	MDV	15.96	21.17
tblVehicleEF	MDV	594.91	665.10
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	1.00	1.40
tblVehicleEF	MDV	1.05	1.35
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.26	0.40
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.33	1.85
tblVehicleEF	MDV	7.1590e-003	7.1720e-003
tblVehicleEF	MDV	1.5580e-003	1.6480e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.32	0.47
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.42	1.98
tblVehicleEF	MH	6.26	15.29
tblVehicleEF	MH	18.14	28.91

tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.15	3.03
tblVehicleEF	MH	1.26	1.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.23	0.53
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	0.94	1.76
tblVehicleEF	MH	7.5470e-003	7.7230e-003
tblVehicleEF	MH	6.3800e-004	8.7700e-004
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.27	0.60
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	1.01	1.88
tblVehicleEF	MH	6.40	15.00

tblVehicleEF	MH	10.25	16.26
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.04	2.87
tblVehicleEF	MH	1.16	1.51
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.24	0.52
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.63	1.11
tblVehicleEF	MH	7.5500e-003	7.7180e-003
tblVehicleEF	MH	5.0500e-004	6.5800e-004
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.28	0.60
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.67	1.19

tblVehicleEF	MH	6.12	15.61
tblVehicleEF	MH	27.75	44.47
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.30	3.28
tblVehicleEF	MH	1.37	1.79
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.22	0.54
tblVehicleEF	MH	3.20	3.85
tblVehicleEF	MH	1.31	2.53
tblVehicleEF	MH	7.5450e-003	7.7280e-003
tblVehicleEF	MH	8.0100e-004	1.1460e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.27	0.61
tblVehicleEF	MH	3.20	3.85

tblVehicleEF	MH	1.40	2.71
tblVehicleEF	MHD	8.9830e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	1.92	2.89
tblVehicleEF	MHD	1.25	3.64
tblVehicleEF	MHD	33.91	52.92
tblVehicleEF	MHD	580.81	572.46
tblVehicleEF	MHD	994.67	1,056.64
tblVehicleEF	MHD	54.15	79.06
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	6.40	7.97
tblVehicleEF	MHD	3.52	6.42
tblVehicleEF	MHD	1.70	2.16
tblVehicleEF	MHD	0.04	0.13
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.03	0.12
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
tblVehicleEF	MHD	0.17	0.44
tblVehicleEF	MHD	0.19	0.42
tblVehicleEF	MHD	1.4260e-003	2.5190e-003
tblVehicleEF	MHD	0.20	0.51
tblVehicleEF	MHD	0.91	1.87

tblVehicleEF	MHD	1.89	4.44
tblVehicleEF	MHD	5.9260e-003	5.5450e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.1700e-003	1.7730e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
tblVehicleEF	MHD	0.17	0.44
tblVehicleEF	MHD	0.22	0.48
tblVehicleEF	MHD	1.4260e-003	2.5190e-003
tblVehicleEF	MHD	0.23	0.57
tblVehicleEF	MHD	0.91	1.87
tblVehicleEF	MHD	2.03	4.77
tblVehicleEF	MHD	8.4650e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	1.39	2.10
tblVehicleEF	MHD	1.26	3.45
tblVehicleEF	MHD	18.53	32.16
tblVehicleEF	MHD	615.32	606.47
tblVehicleEF	MHD	994.67	1,056.64
tblVehicleEF	MHD	54.15	79.06
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	6.61	8.22
tblVehicleEF	MHD	3.47	6.33
tblVehicleEF	MHD	1.57	1.98
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01

tblVehicleEF	MHD	0.03	0.10
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	5.7770e-003	0.01
tblVehicleEF	MHD	0.16	0.42
tblVehicleEF	MHD	0.18	0.40
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.20	0.50
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.21	2.81
tblVehicleEF	MHD	6.2780e-003	5.8740e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.0700e-004	1.3950e-003
tblVehicleEF	MHD	5.7770e-003	0.01
tblVehicleEF	MHD	0.16	0.42
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.23	0.57
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.29	3.02
tblVehicleEF	MHD	9.6970e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	2.64	3.98
tblVehicleEF	MHD	1.25	3.87
tblVehicleEF	MHD	52.70	78.32
tblVehicleEF	MHD	533.16	525.49
tblVehicleEF	MHD	994.67	1,056.64

tblVehicleEF	MHD	54.15	79.06
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tblVehicleEF	MHD	6.12	7.61
tblVehicleEF	MHD	3.62	6.60
tblVehicleEF	MHD	1.85	2.35
tblVehicleEF	MHD	0.04	0.16
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.04	0.14
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
tblVehicleEF	MHD	0.18	0.49
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	1.6400e-004	2.3800e-004
tblVehicleEF	MHD	0.20	0.51
tblVehicleEF	MHD	0.98	2.01
tblVehicleEF	MHD	2.71	6.36
tblVehicleEF	MHD	5.4400e-003	5.0900e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.4910e-003	2.2330e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
tblVehicleEF	MHD	0.18	0.49
tblVehicleEF	MHD	0.24	0.52
tblVehicleEF	MHD	1.6400e-004	2.3800e-004

tblVehicleEF	MHD	0.23	0.58
tblVehicleEF	MHD	0.98	2.01
tblVehicleEF	MHD	2.90	6.84
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	2.48	2.30
tblVehicleEF	OBUS	2.27	10.41
tblVehicleEF	OBUS	15.03	27.71
tblVehicleEF	OBUS	554.85	573.90
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.30	7.28
tblVehicleEF	OBUS	1.05	1.89
tblVehicleEF	OBUS	1.76	1.98
tblVehicleEF	OBUS	0.01	0.06
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	9.4330e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
tblVehicleEF	OBUS	0.42	0.49
tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.13	0.50
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.80	3.61
tblVehicleEF	OBUS	5.6610e-003	5.5590e-003

tblVehicleEF	OBUS	6.8790e-003	7.0190e-003
tblVehicleEF	OBUS	6.2400e-004	1.2250e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
tblVehicleEF	OBUS	0.48	0.56
tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.16	0.56
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.85	3.89
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	1.80	1.67
tblVehicleEF	OBUS	2.35	9.38
tblVehicleEF	OBUS	9.48	22.10
tblVehicleEF	OBUS	587.81	607.99
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.47	7.51
tblVehicleEF	OBUS	0.97	1.74
tblVehicleEF	OBUS	1.62	1.81
tblVehicleEF	OBUS	8.6440e-003	0.05
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	7.9520e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	7.8400e-004	3.3110e-003
tblVehicleEF	OBUS	0.02	0.11

tblVehicleEF	OBUS	0.40	0.46
tblVehicleEF	OBUS	4.0000e-004	1.3380e-003
tblVehicleEF	OBUS	0.14	0.47
tblVehicleEF	OBUS	0.29	0.83
tblVehicleEF	OBUS	0.62	2.42
tblVehicleEF	OBUS	5.9980e-003	5.8890e-003
tblVehicleEF	OBUS	6.8810e-003	7.0020e-003
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tblVehicleEF	OBUS	7.8400e-004	3.3110e-003
tblVehicleEF	OBUS	0.02	0.11
tblVehicleEF	OBUS	0.45	0.53
tblVehicleEF	OBUS	4.0000e-004	1.3380e-003
tblVehicleEF	OBUS	0.17	0.53
tblVehicleEF	OBUS	0.29	0.83
tblVehicleEF	OBUS	0.66	2.61
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	3.41	3.17
tblVehicleEF	OBUS	2.18	11.57
tblVehicleEF	OBUS	21.60	34.32
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tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.06	6.96
tblVehicleEF	OBUS	1.16	2.09
tblVehicleEF	OBUS	1.91	2.15
tblVehicleEF	OBUS	0.01	0.07
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003

tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	0.01	0.07
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	7.3000e-005	1.0800e-004
tblVehicleEF	OBUS	0.02	0.13
tblVehicleEF	OBUS	0.46	0.53
tblVehicleEF	OBUS	4.1000e-005	6.1000e-005
tblVehicleEF	OBUS	0.13	0.53
tblVehicleEF	OBUS	0.34	0.93
tblVehicleEF	OBUS	1.00	4.98
tblVehicleEF	OBUS	5.1970e-003	5.1030e-003
tblVehicleEF	OBUS	6.8780e-003	7.0380e-003
tblVehicleEF	OBUS	7.3400e-004	1.3730e-003
tblVehicleEF	OBUS	7.3000e-005	1.0800e-004
tblVehicleEF	OBUS	0.02	0.13
tblVehicleEF	OBUS	0.52	0.60
tblVehicleEF	OBUS	4.1000e-005	6.1000e-005
tblVehicleEF	OBUS	0.16	0.59
tblVehicleEF	OBUS	0.34	0.93
tblVehicleEF	OBUS	1.07	5.37
tblVehicleEF	SBUS	4.3220e-003	5.3980e-003
tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
tblVehicleEF	SBUS	0.99	1.04
tblVehicleEF	SBUS	9.01	10.47
tblVehicleEF	SBUS	119.14	131.09
tblVehicleEF	SBUS	563.29	581.72
tblVehicleEF	SBUS	1,108.20	1,167.79

tblVehicleEF	SBUS	119.79	126.19
tblVehicleEF	SBUS	1.3900e-003	0.00
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tblVehicleEF	SBUS	8.46	9.43
tblVehicleEF	SBUS	3.65	3.96
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.61	0.60
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.26	0.26
tblVehicleEF	SBUS	2.8030e-003	2.7950e-003
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	0.46	0.53
tblVehicleEF	SBUS	0.09	0.12
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.90	1.02
tblVehicleEF	SBUS	4.29	4.81
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tblVehicleEF	SBUS	5.7480e-003	5.6340e-003
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tblVehicleEF	SBUS	3.3310e-003	3.5360e-003
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	0.46	0.53
tblVehicleEF	SBUS	0.11	0.13

tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.97	1.11
tblVehicleEF	SBUS	4.29	4.81
tblVehicleEF	SBUS	6.18	6.75
tblVehicleEF	SBUS	4.0730e-003	5.0870e-003
tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
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tblVehicleEF	SBUS	1,108.20	1,167.79
tblVehicleEF	SBUS	119.79	126.19
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tblVehicleEF	SBUS	8.30	9.25
tblVehicleEF	SBUS	3.41	3.70
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.61	0.60
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.26	0.26
tblVehicleEF	SBUS	2.8030e-003	2.7950e-003
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	0.42	0.48

tblVehicleEF	SBUS	0.09	0.11
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.95	1.09
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tblVehicleEF	SBUS	6.0890e-003	5.9690e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	2.5660e-003	2.6900e-003
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	0.42	0.48
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tblVehicleEF	SBUS	4.22	4.59
tblVehicleEF	SBUS	4.6660e-003	5.8270e-003
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tblVehicleEF	SBUS	1.37	1.44
tblVehicleEF	SBUS	8.49	9.88
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tblVehicleEF	SBUS	1,108.20	1,167.79
tblVehicleEF	SBUS	119.79	126.19
tblVehicleEF	SBUS	1.3900e-003	0.00
tblVehicleEF	SBUS	7.40	7.83
tblVehicleEF	SBUS	8.75	9.75
tblVehicleEF	SBUS	3.95	4.29
tblVehicleEF	SBUS	0.02	0.03

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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.26	0.26
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.5770e-003	5.5960e-003
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tblVehicleEF	SBUS	5.2760e-003	5.1720e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.4000e-003	4.7180e-003
tblVehicleEF	SBUS	5.5770e-003	5.5960e-003
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tblVehicleEF	SBUS	3.1710e-003	3.1820e-003
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tblVehicleEF	SBUS	4.97	5.58
tblVehicleEF	SBUS	8.85	9.71
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tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00
tblVehicleEF	UBUS	13.18	13.61
tblVehicleEF	UBUS	20.35	20.76
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	2.85	2.91
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	10.79	11.10
tblVehicleEF	UBUS	8.1450e-003	8.1620e-003
tblVehicleEF	UBUS	5.2290e-003	5.3400e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	3.09	3.17
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	11.52	11.85
tblVehicleEF	UBUS	41.16	42.17
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tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00

tblVehicleEF	UBUS	12.24	12.64
tblVehicleEF	UBUS	18.75	19.13
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	2.95	3.02
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.01	9.26
tblVehicleEF	UBUS	8.1690e-003	8.1880e-003
tblVehicleEF	UBUS	4.2050e-003	4.2860e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	3.20	3.28
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.62	9.89
tblVehicleEF	UBUS	38.32	39.25
tblVehicleEF	UBUS	289.36	298.01
tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00
tblVehicleEF	UBUS	14.52	14.99
tblVehicleEF	UBUS	22.11	22.55
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003

tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.74	2.80
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	12.81	13.17
tblVehicleEF	UBUS	8.1180e-003	8.1350e-003
tblVehicleEF	UBUS	6.4330e-003	6.5810e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.97	3.05
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	13.67	14.06
tblVehicleTrips	CC_TL	6.60	15.00
tblVehicleTrips	CC_TL	6.60	45.00
tblVehicleTrips	CC_TTP	28.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00

tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	1.00
tblVehicleTrips	WD_TR	0.00	1.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	231,250.00	320,000.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Mobile	0.2348	2.8494	2.5150	6.3400e-003	0.2225	0.0631	0.2855	0.0600	0.0580	0.1179						631.4785
Offroad	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286
Total	11.3317	48.0724	22.6409	0.1042	0.2225	1.4139	1.6363	0.0600	1.4088	1.4688						11,764.9086

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	lb/day										lb/day					
Area	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Mobile	0.2348	2.8494	2.5150	6.3400e-003	0.2225	0.0631	0.2855	0.0600	0.0580	0.1179						631.4785
Offroad	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286
Total	11.3317	48.0724	22.6409	0.1042	0.2225	1.4139	1.6363	0.0600	1.4088	1.4688						11,764.9086

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	36.45	94.07	88.89	93.92	0.00	95.54	82.55	0.00	95.89	91.97	0.00	0.00	0.00	0.00	0.00	94.63

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	1/1/2017	1/27/2017	5	20	Demolition
2	Grading & Site Work	Grading	1/28/2017	2/24/2017	5	20	Grading & Site Work
3	Concrete & Form Work	Building Construction	2/25/2017	4/7/2017	5	30	Concrete & Form Work
4	Equipment Installation	Building Construction	4/8/2017	4/12/2017	5	3	Equipment Installation
5	Building Construction	Building Construction	4/13/2017	6/7/2017	5	40	Building Construction
6	Site Piping & Electrical	Building Construction	6/8/2017	7/5/2017	5	20	Site Piping & Electrical
7	Final Grading & Paving	Paving	7/6/2017	7/10/2017	5	3	Final Grading & Paving
8	Grading & Site Work at ERB and Sludge Beds	Grading	7/11/2017	8/7/2017	5	20	Grading & Site Work at ERB and Sludge Beds

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 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Excavators	1	2.00	162	0.38
Grading & Site Work	Graders	0	8.00	174	0.41
Grading & Site Work	Plate Compactors	1	2.00	8	0.43
Grading & Site Work	Rollers	1	2.00	80	0.38
Grading & Site Work	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Scrapers	0	8.00	361	0.48
Grading & Site Work	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Concrete & Form Work	Cement and Mortar Mixers	1	6.00	9	0.56
Concrete & Form Work	Cranes	0	7.00	226	0.29
Concrete & Form Work	Forklifts	1	4.00	89	0.20
Concrete & Form Work	Generator Sets	0	8.00	84	0.74
Concrete & Form Work	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete & Form Work	Welders	0	8.00	46	0.45
Equipment Installation	Cranes	1	4.00	226	0.29
Equipment Installation	Forklifts	1	4.00	89	0.20
Equipment Installation	Generator Sets	0	8.00	84	0.74
Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Equipment Installation	Welders	0	8.00	46	0.45
Building Construction	Cranes	0	7.00	226	0.29
Building Construction	Forklifts	1	4.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Site Piping & Electrical	Cranes	0	7.00	226	0.29
Site Piping & Electrical	Forklifts	1	2.00	89	0.20
Site Piping & Electrical	Generator Sets	0	8.00	84	0.74
Site Piping & Electrical	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Site Piping & Electrical	Welders	0	8.00	46	0.45
Final Grading & Paving	Graders	1	3.00	174	0.41
Final Grading & Paving	Pavers	1	4.00	125	0.42
Final Grading & Paving	Paving Equipment	0	8.00	130	0.36
Final Grading & Paving	Rollers	1	2.00	80	0.38
Final Grading & Paving	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Grading & Site Work at ERB and Sludge Beds	Excavators	1	2.00	162	0.38

Grading & Site Work at ERB and Sludge Beds	Graders	1	4.00	174	0.41
Grading & Site Work at ERB and Sludge Beds	Plate Compactors	1	2.00	8	0.43
Grading & Site Work at ERB and Sludge Beds	Rubber Tired Dozers	1	4.00	255	0.40
Grading & Site Work at ERB and Sludge Beds	Scrapers	0	8.00	361	0.48
Grading & Site Work at ERB and Sludge Beds	Tractors/Loaders/Backhoes	1	2.00	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
Demolition	1	3.00	0.00	1.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Concrete & Form Work	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Equipment Installation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Piping & Electrical	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Final Grading & Paving	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work at ERB and Sludge Beds	5	13.00	0.00	2,250.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.9 Grading & Site Work at ERB and Sludge Beds - 2017

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					5.7895	0.0000	5.7895	1.9607	0.0000	1.9607							0.0000
Off-Road	1.2512	13.2450	8.8957	9.7800e-003		0.6863	0.6863		0.6316	0.6316							1,003.6869
Total	1.2512	13.2450	8.8957	9.7800e-003	5.7895	0.6863	6.4758	1.9607	0.6316	2.5922							1,003.6869

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	2.4823	30.0709	28.9832	0.0838	1.9563	0.4411	2.3974	0.5354	0.4055	0.9408							8,299.1086
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1244	0.1722	1.7557	2.3900e-003	0.1661	2.5400e-003	0.1686	0.0440	2.3300e-003	0.0464							188.0395
Total	2.6067	30.2431	30.7389	0.0862	2.1224	0.4436	2.5659	0.5794	0.4078	0.9872							8,487.1481

3.9 Grading & Site Work at ERB and Sludge Beds - 2017

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					2.2579	0.0000	2.2579	0.7647	0.0000	0.7647							0.0000
Off-Road	1.2512	13.2450	8.8957	9.7800e-003		0.6863	0.6863		0.6316	0.6316							1,003.6869
Total	1.2512	13.2450	8.8957	9.7800e-003	2.2579	0.6863	2.9442	0.7647	0.6316	1.3962							1,003.6869

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	2.4823	30.0709	28.9832	0.0838	1.9563	0.4411	2.3974	0.5354	0.4055	0.9408							8,299.1086
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1244	0.1722	1.7557	2.3900e-003	0.1661	2.5400e-003	0.1686	0.0440	2.3300e-003	0.0464							188.0395
Total	2.6067	30.2431	30.7389	0.0862	2.1224	0.4436	2.5659	0.5794	0.4078	0.9872							8,487.1481

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	0.2348	2.8494	2.5150	6.3400e-003	0.2225	0.0631	0.2855	0.0600	0.0580	0.1179						631.4785
Unmitigated	0.2348	2.8494	2.5150	6.3400e-003	0.2225	0.0631	0.2855	0.0600	0.0580	0.1179						631.4785

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,900	3,900
Other Asphalt Surfaces	5.74	0.00	0.00	67,158	67,158
Total	6.74	0.00	0.00	71,058	71,058

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	0.00	15.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	45.00	0.00	0.00	100.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000

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	1.5939					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	5.3721					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003
Total	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003

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	1.5939					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	5.3721					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003
Total	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003

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
Generator Sets	1	24.00	8	500	0.74	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Generator Sets	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286
Total	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286

10.0 Vegetation

Lewiston WWTP - Proposed Project Trinity County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	5.30	1,000.00	0
Other Asphalt Surfaces	5.74	Acre	5.74	250,034.40	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	88
Climate Zone	3			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	546.6	CH4 Intensity (lb/MW hr)	0.025	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment

Land Use - 5.3 acres disturbed, 5.74 acres paved

Construction Phase - Construction schedule does not reflect overlapping activities.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Off-road Equipment - Based on project-specific information.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

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Off-road Equipment - Based on project-specific information provided by the project engineer.

Off-road Equipment - Construction equipment based on project-specific info provided by the project engineer.

Trips and VMT - Construction vehicle trips based on model default of 2.5 employee trips/piece of equipment used. No vendor trips anticipated for this project. 2250 haul truck trips.

Demolition -

Grading - 9500 cy imported, 13000 cy exported. Acreage of disturbance based on model defaults/equipment use.

Vehicle Trips - Assumes one worker trip per day, model default: 15 miles/worker trip. One septage haul trip/year, 45 miles/haul trip.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Vehicle Emission Factors - 50% LDA 50% HDT.

Consumer Products - .

Area Coating - .

Landscape Equipment - Includes landscape maintenance

Energy Use - Energy use based on 0.32 MGD and default wastewater intensity factors.

Water And Wastewater - .

Solid Waste - .

Construction Off-road Equipment Mitigation - Watering=61% CE for graded areas 50% for roadways,

Operational Off-Road Equipment - Assumes one 500 hp diesel genset, 24 hours/day with a max limit of 200 hours/year.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	30.00
tblConstructionPhase	NumDays	300.00	3.00
tblConstructionPhase	NumDays	300.00	40.00
tblConstructionPhase	NumDays	300.00	20.00
tblConstructionPhase	NumDays	30.00	20.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00

tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	500.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	546.6
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblTripsAndVMT	HaulingTripNumber	2,813.00	2,250.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	VendorTripNumber	41.00	0.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblTripsAndVMT	WorkerTripNumber	105.00	5.00
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	3.02	2.90
tblVehicleEF	HHD	1.67	2.63
tblVehicleEF	HHD	113.32	137.88

tblVehicleEF	HHD	548.09	574.65
tblVehicleEF	HHD	1,606.12	1,702.12
tblVehicleEF	HHD	72.92	104.38
tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.46	6.01
tblVehicleEF	HHD	5.18	9.02
tblVehicleEF	HHD	4.09	4.07
tblVehicleEF	HHD	0.02	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01
tblVehicleEF	HHD	3.7650e-003	6.3560e-003
tblVehicleEF	HHD	0.28	0.55
tblVehicleEF	HHD	0.55	0.59
tblVehicleEF	HHD	1.5630e-003	2.5060e-003
tblVehicleEF	HHD	0.23	0.38
tblVehicleEF	HHD	1.21	2.15
tblVehicleEF	HHD	4.67	8.07
tblVehicleEF	HHD	5.5930e-003	5.5660e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.7050e-003	3.4790e-003
tblVehicleEF	HHD	3.7650e-003	6.3560e-003

tblVehicleEF	HHD	0.28	0.55
tblVehicleEF	HHD	0.62	0.67
tblVehicleEF	HHD	1.5630e-003	2.5060e-003
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.21	2.15
tblVehicleEF	HHD	5.02	8.70
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	2.19	2.11
tblVehicleEF	HHD	1.66	2.58
tblVehicleEF	HHD	78.77	106.32
tblVehicleEF	HHD	580.65	608.79
tblVehicleEF	HHD	1,606.12	1,702.12
tblVehicleEF	HHD	72.92	104.38
tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.60	6.20
tblVehicleEF	HHD	5.13	8.94
tblVehicleEF	HHD	3.74	3.71
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01

tblVehicleEF	HHD	6.1630e-003	0.01
tblVehicleEF	HHD	0.27	0.53
tblVehicleEF	HHD	0.52	0.55
tblVehicleEF	HHD	3.2860e-003	5.3130e-003
tblVehicleEF	HHD	0.23	0.38
tblVehicleEF	HHD	1.15	2.03
tblVehicleEF	HHD	3.08	5.25
tblVehicleEF	HHD	5.9250e-003	5.8970e-003
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tblVehicleEF	HHD	2.1130e-003	2.8940e-003
tblVehicleEF	HHD	6.1630e-003	0.01
tblVehicleEF	HHD	0.27	0.53
tblVehicleEF	HHD	0.59	0.63
tblVehicleEF	HHD	3.2860e-003	5.3130e-003
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.15	2.03
tblVehicleEF	HHD	3.32	5.66
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	4.15	3.99
tblVehicleEF	HHD	1.67	2.68
tblVehicleEF	HHD	154.40	175.43
tblVehicleEF	HHD	503.12	527.51
tblVehicleEF	HHD	1,606.12	1,702.12
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tblVehicleEF	HHD	0.16	0.50
tblVehicleEF	HHD	4.26	5.74
tblVehicleEF	HHD	5.31	9.24

tblVehicleEF	HHD	4.46	4.46
tblVehicleEF	HHD	0.02	0.05
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.20
tblVehicleEF	HHD	8.1060e-003	0.02
tblVehicleEF	HHD	0.02	0.05
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.6320e-003	8.5970e-003
tblVehicleEF	HHD	0.07	0.19
tblVehicleEF	HHD	6.3110e-003	0.01
tblVehicleEF	HHD	2.8400e-004	3.8400e-004
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tblVehicleEF	HHD	0.59	0.63
tblVehicleEF	HHD	1.6100e-004	2.1700e-004
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tblVehicleEF	HHD	1.30	2.30
tblVehicleEF	HHD	6.52	11.37
tblVehicleEF	HHD	5.1340e-003	5.1090e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.4090e-003	4.1740e-003
tblVehicleEF	HHD	2.8400e-004	3.8400e-004
tblVehicleEF	HHD	0.32	0.63
tblVehicleEF	HHD	0.67	0.72
tblVehicleEF	HHD	1.6100e-004	2.1700e-004
tblVehicleEF	HHD	0.27	0.44
tblVehicleEF	HHD	1.30	2.30
tblVehicleEF	HHD	7.01	12.26

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tblVehicleEF	LDA	0.02	0.03
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tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.18	0.30
tblVehicleEF	LDA	0.22	0.38
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.07	0.16
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.31	0.59
tblVehicleEF	LDA	4.1920e-003	4.2170e-003
tblVehicleEF	LDA	8.0800e-004	8.6400e-004
tblVehicleEF	LDA	0.06	0.09
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.19
tblVehicleEF	LDA	0.43	0.74
tblVehicleEF	LDA	0.33	0.63
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	1.73	2.97
tblVehicleEF	LDA	2.89	4.82
tblVehicleEF	LDA	316.13	373.72
tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.16	0.27
tblVehicleEF	LDA	0.19	0.34
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
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tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.07	0.15
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.23	0.44
tblVehicleEF	LDA	4.2920e-003	4.3150e-003
tblVehicleEF	LDA	7.8700e-004	8.2800e-004
tblVehicleEF	LDA	0.10	0.15
tblVehicleEF	LDA	0.19	0.29
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.09	0.18
tblVehicleEF	LDA	0.40	0.67
tblVehicleEF	LDA	0.24	0.47
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	1.74	3.15
tblVehicleEF	LDA	5.44	8.85
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tblVehicleEF	LDA	56.58	66.88
tblVehicleEF	LDA	0.28	0.50
tblVehicleEF	LDA	0.21	0.34
tblVehicleEF	LDA	0.24	0.42
tblVehicleEF	LDA	3.5940e-003	4.9000e-003
tblVehicleEF	LDA	4.2380e-003	4.9810e-003
tblVehicleEF	LDA	3.3110e-003	4.4380e-003
tblVehicleEF	LDA	3.9040e-003	4.4880e-003
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
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tblVehicleEF	LDA	3.4200e-003	4.3570e-003
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tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.40	0.77
tblVehicleEF	LDA	4.1100e-003	4.1370e-003
tblVehicleEF	LDA	8.3200e-004	9.0200e-004
tblVehicleEF	LDA	6.3330e-003	8.0670e-003
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	3.4200e-003	4.3570e-003
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tblVehicleEF	LDA	0.49	0.83
tblVehicleEF	LDA	0.43	0.82
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tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.62	10.21

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tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.61	0.97
tblVehicleEF	LDT1	0.46	0.67
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.24	0.52
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.84	1.41
tblVehicleEF	LDT1	4.9280e-003	5.0210e-003
tblVehicleEF	LDT1	1.0650e-003	1.2040e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.45	0.65
tblVehicleEF	LDT1	0.10	0.14
tblVehicleEF	LDT1	0.28	0.59
tblVehicleEF	LDT1	1.80	2.50
tblVehicleEF	LDT1	0.90	1.51
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.50	9.72
tblVehicleEF	LDT1	8.06	12.47

tblVehicleEF	LDT1	377.71	440.53
tblVehicleEF	LDT1	68.49	81.41
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tblVehicleEF	LDT1	0.54	0.86
tblVehicleEF	LDT1	0.41	0.60
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
tblVehicleEF	LDT1	6.7710e-003	0.01
tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.23	0.49
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.61	1.02
tblVehicleEF	LDT1	5.0310e-003	5.1130e-003
tblVehicleEF	LDT1	1.0040e-003	1.1110e-003
tblVehicleEF	LDT1	0.29	0.41
tblVehicleEF	LDT1	0.46	0.66
tblVehicleEF	LDT1	0.21	0.28
tblVehicleEF	LDT1	0.28	0.55
tblVehicleEF	LDT1	1.55	2.16
tblVehicleEF	LDT1	0.66	1.09
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.05	0.08
tblVehicleEF	LDT1	5.82	10.85
tblVehicleEF	LDT1	15.28	23.23
tblVehicleEF	LDT1	363.16	424.44

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tblVehicleEF	LDT1	0.51	0.75
tblVehicleEF	LDT1	7.3720e-003	0.01
tblVehicleEF	LDT1	7.6190e-003	0.01
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tblVehicleEF	LDT1	6.9900e-003	9.9690e-003
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tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
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tblVehicleEF	LDT1	1.10	1.85
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tblVehicleEF	LDT1	1.1320e-003	1.3060e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.46	0.68
tblVehicleEF	LDT1	9.2110e-003	0.01
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tblVehicleEF	LDT2	0.03	0.05
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tblVehicleEF	LDT2	83.05	94.45

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tblVehicleEF	LDT2	0.46	0.77
tblVehicleEF	LDT2	3.7850e-003	5.1990e-003
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tblVehicleEF	LDT2	4.0280e-003	4.7830e-003
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tblVehicleEF	LDT2	0.24	0.33
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tblVehicleEF	LDT2	0.11	0.22
tblVehicleEF	LDT2	0.97	1.37
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tblVehicleEF	LDT2	1.1220e-003	1.1990e-003
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tblVehicleEF	LDT2	0.05	0.06
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tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.03	0.05
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tblVehicleEF	LDT2	83.05	94.45
tblVehicleEF	LDT2	0.17	0.00

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tblVehicleEF	LDT2	0.41	0.69
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tblVehicleEF	LDT2	4.3730e-003	5.2840e-003
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tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.11	0.21
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tblVehicleEF	LDT2	1.0890e-003	1.1450e-003
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tblVehicleEF	LDT2	0.25	0.34
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tblVehicleEF	LDT2	0.14	0.26
tblVehicleEF	LDT2	0.84	1.17
tblVehicleEF	LDT2	0.37	0.66
tblVehicleEF	LDT2	0.03	0.04
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tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
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tblVehicleEF	LDT2	1.1580e-003	1.2570e-003
tblVehicleEF	LDT2	8.8630e-003	9.8360e-003
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tblVehicleEF	LDT2	4.7850e-003	5.3130e-003
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tblVehicleEF	LHD1	0.03	0.04
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tblVehicleEF	LHD1	7.57	9.64
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46

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tblVehicleEF	LHD1	1.00	1.10
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
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tblVehicleEF	LHD1	0.01	0.01
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tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
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tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.52	0.67
tblVehicleEF	LHD1	6.9090e-003	6.9510e-003
tblVehicleEF	LHD1	3.8600e-004	4.2000e-004
tblVehicleEF	LHD1	2.6210e-003	3.0040e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	9.4000e-004	1.0190e-003
tblVehicleEF	LHD1	0.37	0.51

tblVehicleEF	LHD1	1.06	1.16
tblVehicleEF	LHD1	0.56	0.71
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	3.34	4.77
tblVehicleEF	LHD1	4.66	5.91
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.54	3.47
tblVehicleEF	LHD1	0.92	1.01
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
tblVehicleEF	LHD1	0.34	0.47
tblVehicleEF	LHD1	0.99	1.09
tblVehicleEF	LHD1	0.40	0.50
tblVehicleEF	LHD1	6.9110e-003	6.9530e-003
tblVehicleEF	LHD1	3.3700e-004	3.5600e-004
tblVehicleEF	LHD1	4.3050e-003	4.9740e-003
tblVehicleEF	LHD1	0.10	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.9030e-003	2.0730e-003
tblVehicleEF	LHD1	0.38	0.53
tblVehicleEF	LHD1	0.99	1.09
tblVehicleEF	LHD1	0.42	0.54
tblVehicleEF	LHD1	1.0020e-003	1.0060e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	3.15	4.54
tblVehicleEF	LHD1	10.99	14.03
tblVehicleEF	LHD1	9.11	9.60
tblVehicleEF	LHD1	655.73	692.72
tblVehicleEF	LHD1	23.51	24.46
tblVehicleEF	LHD1	0.09	0.00
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	2.67	3.66
tblVehicleEF	LHD1	1.09	1.19
tblVehicleEF	LHD1	1.4020e-003	1.5100e-003
tblVehicleEF	LHD1	0.06	0.06

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.3060e-003	1.7970e-003
tblVehicleEF	LHD1	1.2900e-003	1.3890e-003
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.6050e-003	2.6070e-003
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	1.2090e-003	1.6510e-003
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.32	0.45
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.66	0.85
tblVehicleEF	LHD1	6.9070e-003	6.9490e-003
tblVehicleEF	LHD1	4.4400e-004	4.9500e-004
tblVehicleEF	LHD1	2.1600e-004	2.0800e-004
tblVehicleEF	LHD1	0.11	0.13
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.2300e-004	1.1800e-004
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	1.15	1.26
tblVehicleEF	LHD1	0.71	0.91
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11

tblVehicleEF	LHD2	1.35	2.20
tblVehicleEF	LHD2	1.91	3.09
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.81	3.62
tblVehicleEF	LHD2	0.37	0.40
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
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tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.14	0.25
tblVehicleEF	LHD2	5.8200e-003	5.8340e-003
tblVehicleEF	LHD2	1.5100e-004	1.8000e-004

tblVehicleEF	LHD2	5.5700e-004	8.7100e-004
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2100e-004	3.1700e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	0.15	0.26
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.34	2.13
tblVehicleEF	LHD2	1.19	1.95
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00
tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.78	3.58
tblVehicleEF	LHD2	0.34	0.37
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003

tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.10	0.17
tblVehicleEF	LHD2	5.8200e-003	5.8330e-003
tblVehicleEF	LHD2	1.3800e-004	1.5900e-004
tblVehicleEF	LHD2	9.0700e-004	1.4350e-003
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5100e-004	6.5300e-004
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.18	0.25
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	6.6700e-004	6.6900e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.0410e-003	0.01
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	1.36	2.27
tblVehicleEF	LHD2	2.76	4.45
tblVehicleEF	LHD2	9.91	10.44
tblVehicleEF	LHD2	561.89	592.12
tblVehicleEF	LHD2	10.90	12.18
tblVehicleEF	LHD2	8.4950e-003	0.00

tblVehicleEF	LHD2	0.17	0.17
tblVehicleEF	LHD2	2.88	3.72
tblVehicleEF	LHD2	0.40	0.43
tblVehicleEF	LHD2	1.8470e-003	1.9140e-003
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	3.2800e-004	7.6500e-004
tblVehicleEF	LHD2	1.6990e-003	1.7610e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	2.8250e-003	2.8280e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	2.8900e-004	6.4500e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.19	0.26
tblVehicleEF	LHD2	0.21	0.30
tblVehicleEF	LHD2	0.18	0.33
tblVehicleEF	LHD2	5.8200e-003	5.8350e-003
tblVehicleEF	LHD2	1.6500e-004	2.0400e-004
tblVehicleEF	LHD2	5.3000e-005	6.4000e-005
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-005	3.6000e-005
tblVehicleEF	LHD2	0.21	0.29
tblVehicleEF	LHD2	0.21	0.30

tblVehicleEF	LHD2	0.19	0.35
tblVehicleEF	MCY	23.69	27.46
tblVehicleEF	MCY	12.88	12.35
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.26	1.29
tblVehicleEF	MCY	0.33	0.33
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	2.75	2.94
tblVehicleEF	MCY	1.80	2.93
tblVehicleEF	MCY	2.67	2.87
tblVehicleEF	MCY	2.1150e-003	2.1120e-003
tblVehicleEF	MCY	7.2400e-004	7.5400e-004
tblVehicleEF	MCY	0.62	0.70
tblVehicleEF	MCY	0.43	0.63
tblVehicleEF	MCY	0.27	0.32
tblVehicleEF	MCY	3.01	3.21
tblVehicleEF	MCY	1.80	2.93

tblVehicleEF	MCY	2.87	3.09
tblVehicleEF	MCY	21.02	24.10
tblVehicleEF	MCY	9.56	9.43
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.15	1.18
tblVehicleEF	MCY	0.30	0.30
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.59	2.72
tblVehicleEF	MCY	1.56	2.62
tblVehicleEF	MCY	2.02	2.13
tblVehicleEF	MCY	2.0680e-003	2.0520e-003
tblVehicleEF	MCY	6.5100e-004	6.8500e-004
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.47	0.65
tblVehicleEF	MCY	0.56	0.65
tblVehicleEF	MCY	2.84	2.98
tblVehicleEF	MCY	1.56	2.62

tblVehicleEF	MCY	2.17	2.29
tblVehicleEF	MCY	26.64	31.19
tblVehicleEF	MCY	16.85	15.85
tblVehicleEF	MCY	154.87	156.47
tblVehicleEF	MCY	40.88	46.25
tblVehicleEF	MCY	8.3470e-003	0.00
tblVehicleEF	MCY	1.40	1.44
tblVehicleEF	MCY	0.36	0.37
tblVehicleEF	MCY	0.04	0.04
tblVehicleEF	MCY	8.0000e-003	7.9990e-003
tblVehicleEF	MCY	5.1100e-004	1.0970e-003
tblVehicleEF	MCY	1.8920e-003	4.1710e-003
tblVehicleEF	MCY	0.02	0.02
tblVehicleEF	MCY	4.1700e-004	8.6600e-004
tblVehicleEF	MCY	1.5020e-003	3.2200e-003
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.94	3.18
tblVehicleEF	MCY	2.13	3.36
tblVehicleEF	MCY	3.43	3.73
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tblVehicleEF	MCY	8.1000e-004	8.3700e-004
tblVehicleEF	MCY	0.02	0.03
tblVehicleEF	MCY	0.42	0.65
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	3.20	3.46
tblVehicleEF	MCY	2.13	3.36

tblVehicleEF	MCY	3.68	4.01
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.03	7.22
tblVehicleEF	MDV	12.10	16.07
tblVehicleEF	MDV	606.15	677.35
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.87	1.22
tblVehicleEF	MDV	0.95	1.22
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.26	0.39
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.03	1.43
tblVehicleEF	MDV	7.2920e-003	7.2980e-003
tblVehicleEF	MDV	1.4880e-003	1.5550e-003
tblVehicleEF	MDV	0.14	0.15
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.66	1.82
tblVehicleEF	MDV	1.10	1.53

tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	4.95	7.04
tblVehicleEF	MDV	8.55	11.37
tblVehicleEF	MDV	619.59	692.00
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	0.78	1.09
tblVehicleEF	MDV	0.85	1.09
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.77	1.06
tblVehicleEF	MDV	7.4520e-003	7.4510e-003
tblVehicleEF	MDV	1.4240e-003	1.4700e-003
tblVehicleEF	MDV	0.21	0.23
tblVehicleEF	MDV	0.41	0.43
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.31	0.46
tblVehicleEF	MDV	1.42	1.56
tblVehicleEF	MDV	0.82	1.13
tblVehicleEF	MDV	0.05	0.07

tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	5.17	7.50
tblVehicleEF	MDV	15.96	21.17
tblVehicleEF	MDV	594.91	665.10
tblVehicleEF	MDV	108.92	120.30
tblVehicleEF	MDV	0.14	0.00
tblVehicleEF	MDV	1.00	1.40
tblVehicleEF	MDV	1.05	1.35
tblVehicleEF	MDV	5.6270e-003	7.1200e-003
tblVehicleEF	MDV	6.0960e-003	7.2410e-003
tblVehicleEF	MDV	5.1790e-003	6.5250e-003
tblVehicleEF	MDV	5.6170e-003	6.6420e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.26	0.40
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.33	1.85
tblVehicleEF	MDV	7.1590e-003	7.1720e-003
tblVehicleEF	MDV	1.5580e-003	1.6480e-003
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.40	0.41
tblVehicleEF	MDV	7.5910e-003	6.9160e-003
tblVehicleEF	MDV	0.32	0.47
tblVehicleEF	MDV	1.99	2.18
tblVehicleEF	MDV	1.42	1.98
tblVehicleEF	MH	6.26	15.29
tblVehicleEF	MH	18.14	28.91

tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.15	3.03
tblVehicleEF	MH	1.26	1.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.23	0.53
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	0.94	1.76
tblVehicleEF	MH	7.5470e-003	7.7230e-003
tblVehicleEF	MH	6.3800e-004	8.7700e-004
tblVehicleEF	MH	1.14	1.63
tblVehicleEF	MH	0.10	0.15
tblVehicleEF	MH	0.29	0.42
tblVehicleEF	MH	0.27	0.60
tblVehicleEF	MH	3.01	3.63
tblVehicleEF	MH	1.01	1.88
tblVehicleEF	MH	6.40	15.00

tblVehicleEF	MH	10.25	16.26
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.04	2.87
tblVehicleEF	MH	1.16	1.51
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.24	0.52
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.63	1.11
tblVehicleEF	MH	7.5500e-003	7.7180e-003
tblVehicleEF	MH	5.0500e-004	6.5800e-004
tblVehicleEF	MH	1.86	2.68
tblVehicleEF	MH	0.10	0.14
tblVehicleEF	MH	0.62	0.89
tblVehicleEF	MH	0.28	0.60
tblVehicleEF	MH	2.87	3.47
tblVehicleEF	MH	0.67	1.19

tblVehicleEF	MH	6.12	15.61
tblVehicleEF	MH	27.75	44.47
tblVehicleEF	MH	703.61	743.90
tblVehicleEF	MH	30.32	36.28
tblVehicleEF	MH	5.4740e-003	0.00
tblVehicleEF	MH	2.30	3.28
tblVehicleEF	MH	1.37	1.79
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	8.5170e-003	8.5400e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.6190e-003	3.7330e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1290e-003	2.1350e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.4530e-003	3.1880e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.22	0.54
tblVehicleEF	MH	3.20	3.85
tblVehicleEF	MH	1.31	2.53
tblVehicleEF	MH	7.5450e-003	7.7280e-003
tblVehicleEF	MH	8.0100e-004	1.1460e-003
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	0.11	0.16
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	0.27	0.61
tblVehicleEF	MH	3.20	3.85

tblVehicleEF	MH	1.40	2.71
tblVehicleEF	MHD	8.9830e-003	0.02
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tblVehicleEF	MHD	1.92	2.89
tblVehicleEF	MHD	1.25	3.64
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tblVehicleEF	MHD	3.52	6.42
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tblVehicleEF	MHD	0.11	0.11
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tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.03	0.12
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
tblVehicleEF	MHD	0.17	0.44
tblVehicleEF	MHD	0.19	0.42
tblVehicleEF	MHD	1.4260e-003	2.5190e-003
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tblVehicleEF	MHD	0.91	1.87

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tblVehicleEF	MHD	5.9260e-003	5.5450e-003
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tblVehicleEF	MHD	1.1700e-003	1.7730e-003
tblVehicleEF	MHD	3.5330e-003	6.5530e-003
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tblVehicleEF	MHD	1.4260e-003	2.5190e-003
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tblVehicleEF	MHD	0.91	1.87
tblVehicleEF	MHD	2.03	4.77
tblVehicleEF	MHD	8.4650e-003	0.02
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tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01

tblVehicleEF	MHD	0.03	0.10
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
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tblVehicleEF	MHD	0.18	0.40
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.20	0.50
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.21	2.81
tblVehicleEF	MHD	6.2780e-003	5.8740e-003
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tblVehicleEF	MHD	9.0700e-004	1.3950e-003
tblVehicleEF	MHD	5.7770e-003	0.01
tblVehicleEF	MHD	0.16	0.42
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	2.9600e-003	5.2940e-003
tblVehicleEF	MHD	0.23	0.57
tblVehicleEF	MHD	0.85	1.76
tblVehicleEF	MHD	1.29	3.02
tblVehicleEF	MHD	9.6970e-003	0.02
tblVehicleEF	MHD	7.4160e-003	0.02
tblVehicleEF	MHD	2.64	3.98
tblVehicleEF	MHD	1.25	3.87
tblVehicleEF	MHD	52.70	78.32
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tblVehicleEF	MHD	994.67	1,056.64

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tblVehicleEF	MHD	1.85	2.35
tblVehicleEF	MHD	0.04	0.16
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.08	0.23
tblVehicleEF	MHD	3.0960e-003	0.01
tblVehicleEF	MHD	0.04	0.14
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.07	0.21
tblVehicleEF	MHD	2.7100e-003	8.6180e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
tblVehicleEF	MHD	0.18	0.49
tblVehicleEF	MHD	0.21	0.46
tblVehicleEF	MHD	1.6400e-004	2.3800e-004
tblVehicleEF	MHD	0.20	0.51
tblVehicleEF	MHD	0.98	2.01
tblVehicleEF	MHD	2.71	6.36
tblVehicleEF	MHD	5.4400e-003	5.0900e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.4910e-003	2.2330e-003
tblVehicleEF	MHD	2.9000e-004	4.2000e-004
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tblVehicleEF	MHD	1.6400e-004	2.3800e-004

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tblVehicleEF	OBUS	554.85	573.90
tblVehicleEF	OBUS	640.60	674.85
tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
tblVehicleEF	OBUS	5.30	7.28
tblVehicleEF	OBUS	1.05	1.89
tblVehicleEF	OBUS	1.76	1.98
tblVehicleEF	OBUS	0.01	0.06
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	9.4330e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
tblVehicleEF	OBUS	0.42	0.49
tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.13	0.50
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.80	3.61
tblVehicleEF	OBUS	5.6610e-003	5.5590e-003

tblVehicleEF	OBUS	6.8790e-003	7.0190e-003
tblVehicleEF	OBUS	6.2400e-004	1.2250e-003
tblVehicleEF	OBUS	5.0400e-004	2.0100e-003
tblVehicleEF	OBUS	0.02	0.12
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tblVehicleEF	OBUS	1.9100e-004	5.9300e-004
tblVehicleEF	OBUS	0.16	0.56
tblVehicleEF	OBUS	0.31	0.87
tblVehicleEF	OBUS	0.85	3.89
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
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tblVehicleEF	OBUS	1.62	1.81
tblVehicleEF	OBUS	8.6440e-003	0.05
tblVehicleEF	OBUS	4.8100e-004	2.0850e-003
tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	7.9520e-003	0.05
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
tblVehicleEF	OBUS	7.8400e-004	3.3110e-003
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tblVehicleEF	OBUS	0.62	2.42
tblVehicleEF	OBUS	5.9980e-003	5.8890e-003
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tblVehicleEF	OBUS	4.0000e-004	1.3380e-003
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tblVehicleEF	OBUS	0.29	0.83
tblVehicleEF	OBUS	0.66	2.61
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tblVehicleEF	OBUS	34.01	66.62
tblVehicleEF	OBUS	6.2500e-004	0.00
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tblVehicleEF	OBUS	4.8100e-004	2.0850e-003

tblVehicleEF	OBUS	4.7000e-004	9.8630e-003
tblVehicleEF	OBUS	0.01	0.07
tblVehicleEF	OBUS	4.4600e-004	1.7050e-003
tblVehicleEF	OBUS	4.3700e-004	7.5390e-003
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tblVehicleEF	OBUS	0.34	0.93
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tblVehicleEF	SBUS	5.7900e-003	7.8670e-003
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tblVehicleEF	SBUS	1,108.20	1,167.79

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tblVehicleEF	SBUS	0.05	0.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.03
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.07	0.08
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tblVehicleEF	SBUS	3.3310e-003	3.5360e-003
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	0.46	0.53
tblVehicleEF	SBUS	0.11	0.13

tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.97	1.11
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.02
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tblVehicleEF	SBUS	3.1710e-003	3.1820e-003
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tblVehicleEF	UBUS	13.18	13.61
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tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
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tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	2.85	2.91
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	10.79	11.10
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tblVehicleEF	UBUS	5.2290e-003	5.3400e-003
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.57	0.63
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	3.09	3.17
tblVehicleEF	UBUS	3.58	3.42
tblVehicleEF	UBUS	11.52	11.85
tblVehicleEF	UBUS	41.16	42.17
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tblVehicleEF	UBUS	6.1100e-004	0.00

tblVehicleEF	UBUS	12.24	12.64
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tblVehicleEF	UBUS	2.4320e-003	2.7670e-003
tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	2.95	3.02
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.01	9.26
tblVehicleEF	UBUS	8.1690e-003	8.1880e-003
tblVehicleEF	UBUS	4.2050e-003	4.2860e-003
tblVehicleEF	UBUS	0.05	0.06
tblVehicleEF	UBUS	0.61	0.67
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	3.20	3.28
tblVehicleEF	UBUS	2.92	2.80
tblVehicleEF	UBUS	9.62	9.89
tblVehicleEF	UBUS	38.32	39.25
tblVehicleEF	UBUS	289.36	298.01
tblVehicleEF	UBUS	695.82	733.03
tblVehicleEF	UBUS	139.35	146.80
tblVehicleEF	UBUS	6.1100e-004	0.00
tblVehicleEF	UBUS	14.52	14.99
tblVehicleEF	UBUS	22.11	22.55
tblVehicleEF	UBUS	2.4320e-003	2.7670e-003

tblVehicleEF	UBUS	4.2880e-003	4.8390e-003
tblVehicleEF	UBUS	2.2560e-003	2.5670e-003
tblVehicleEF	UBUS	3.9780e-003	4.4900e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.74	2.80
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	12.81	13.17
tblVehicleEF	UBUS	8.1180e-003	8.1350e-003
tblVehicleEF	UBUS	6.4330e-003	6.5810e-003
tblVehicleEF	UBUS	3.1640e-003	3.4570e-003
tblVehicleEF	UBUS	0.54	0.60
tblVehicleEF	UBUS	1.9340e-003	2.1160e-003
tblVehicleEF	UBUS	2.97	3.05
tblVehicleEF	UBUS	4.47	4.26
tblVehicleEF	UBUS	13.67	14.06
tblVehicleTrips	CC_TL	6.60	15.00
tblVehicleTrips	CC_TL	6.60	45.00
tblVehicleTrips	CC_TTP	28.00	100.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00

tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	1.00
tblVehicleTrips	WD_TR	0.00	1.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	231,250.00	320,000.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							0.0000
Mobile	0.2901	2.9661	3.1553	6.3000e-003	0.2225	0.0632	0.2856	0.0600	0.0581	0.1181							626.1356
Offroad	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508							11,133.4286
Total	11.3870	48.1891	23.2812	0.1042	0.2225	1.4140	1.6365	0.0600	1.4089	1.4689							11,759.5657

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	lb/day										lb/day					
Area	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.5600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Mobile	0.2901	2.9661	3.1553	6.3000e-003	0.2225	0.0632	0.2856	0.0600	0.0581	0.1181						626.1356
Offroad	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286
Total	11.3870	48.1891	23.2812	0.1042	0.2225	1.4140	1.6365	0.0600	1.4089	1.4689						11,759.5657

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	36.28	93.84	86.44	93.95	0.00	95.53	82.55	0.00	95.88	91.96	0.00	0.00	0.00	0.00	0.00	94.68

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	1/1/2017	1/27/2017	5	20	Demolition
2	Grading & Site Work	Grading	1/28/2017	2/24/2017	5	20	Grading & Site Work
3	Concrete & Form Work	Building Construction	2/25/2017	4/7/2017	5	30	Concrete & Form Work
4	Equipment Installation	Building Construction	4/8/2017	4/12/2017	5	3	Equipment Installation
5	Building Construction	Building Construction	4/13/2017	6/7/2017	5	40	Building Construction
6	Site Piping & Electrical	Building Construction	6/8/2017	7/5/2017	5	20	Site Piping & Electrical
7	Final Grading & Paving	Paving	7/6/2017	7/10/2017	5	3	Final Grading & Paving
8	Grading & Site Work at ERB and Sludge Beds	Grading	7/11/2017	8/7/2017	5	20	Grading & Site Work at ERB and Sludge Beds

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 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Excavators	1	2.00	162	0.38
Grading & Site Work	Graders	0	8.00	174	0.41
Grading & Site Work	Plate Compactors	1	2.00	8	0.43
Grading & Site Work	Rollers	1	2.00	80	0.38
Grading & Site Work	Rubber Tired Dozers	0	8.00	255	0.40
Grading & Site Work	Scrapers	0	8.00	361	0.48
Grading & Site Work	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Concrete & Form Work	Cement and Mortar Mixers	1	6.00	9	0.56
Concrete & Form Work	Cranes	0	7.00	226	0.29
Concrete & Form Work	Forklifts	1	4.00	89	0.20
Concrete & Form Work	Generator Sets	0	8.00	84	0.74
Concrete & Form Work	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Concrete & Form Work	Welders	0	8.00	46	0.45
Equipment Installation	Cranes	1	4.00	226	0.29
Equipment Installation	Forklifts	1	4.00	89	0.20
Equipment Installation	Generator Sets	0	8.00	84	0.74
Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Equipment Installation	Welders	0	8.00	46	0.45
Building Construction	Cranes	0	7.00	226	0.29
Building Construction	Forklifts	1	4.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Site Piping & Electrical	Cranes	0	7.00	226	0.29
Site Piping & Electrical	Forklifts	1	2.00	89	0.20
Site Piping & Electrical	Generator Sets	0	8.00	84	0.74
Site Piping & Electrical	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Site Piping & Electrical	Welders	0	8.00	46	0.45
Final Grading & Paving	Graders	1	3.00	174	0.41
Final Grading & Paving	Pavers	1	4.00	125	0.42
Final Grading & Paving	Paving Equipment	0	8.00	130	0.36
Final Grading & Paving	Rollers	1	2.00	80	0.38
Final Grading & Paving	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Grading & Site Work at ERB and Sludge Beds	Excavators	1	2.00	162	0.38

Grading & Site Work at ERB and Sludge Beds	Graders	1	4.00	174	0.41
Grading & Site Work at ERB and Sludge Beds	Plate Compactors	1	2.00	8	0.43
Grading & Site Work at ERB and Sludge Beds	Rubber Tired Dozers	1	4.00	255	0.40
Grading & Site Work at ERB and Sludge Beds	Scrapers	0	8.00	361	0.48
Grading & Site Work at ERB and Sludge Beds	Tractors/Loaders/Backhoes	1	2.00	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
Demolition	1	3.00	0.00	1.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Concrete & Form Work	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Equipment Installation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Piping & Electrical	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Final Grading & Paving	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading & Site Work at ERB and Sludge Beds	5	13.00	0.00	2,250.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.9 Grading & Site Work at ERB and Sludge Beds - 2017

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					5.7895	0.0000	5.7895	1.9607	0.0000	1.9607							0.0000
Off-Road	1.2512	13.2450	8.8957	9.7800e-003		0.6863	0.6863		0.6316	0.6316							1,003.6869
Total	1.2512	13.2450	8.8957	9.7800e-003	5.7895	0.6863	6.4758	1.9607	0.6316	2.5922							1,003.6869

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	3.4438	31.1390	48.1741	0.0839	1.9563	0.4428	2.3991	0.5354	0.4071	0.9424							8,279.5906
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1389	0.2206	1.9642	2.3000e-003	0.1661	2.5400e-003	0.1686	0.0440	2.3300e-003	0.0464							180.4615
Total	3.5827	31.3596	50.1383	0.0862	2.1224	0.4453	2.5677	0.5794	0.4094	0.9888							8,460.0521

3.9 Grading & Site Work at ERB and Sludge Beds - 2017

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					2.2579	0.0000	2.2579	0.7647	0.0000	0.7647							0.0000
Off-Road	1.2512	13.2450	8.8957	9.7800e-003		0.6863	0.6863		0.6316	0.6316							1,003.6869
Total	1.2512	13.2450	8.8957	9.7800e-003	2.2579	0.6863	2.9442	0.7647	0.6316	1.3962							1,003.6869

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	3.4438	31.1390	48.1741	0.0839	1.9563	0.4428	2.3991	0.5354	0.4071	0.9424							8,279.5906
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1389	0.2206	1.9642	2.3000e-003	0.1661	2.5400e-003	0.1686	0.0440	2.3300e-003	0.0464							180.4615
Total	3.5827	31.3596	50.1383	0.0862	2.1224	0.4453	2.5677	0.5794	0.4094	0.9888							8,460.0521

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	0.2901	2.9661	3.1553	6.3000e-003	0.2225	0.0632	0.2856	0.0600	0.0581	0.1181						626.1356
Unmitigated	0.2901	2.9661	3.1553	6.3000e-003	0.2225	0.0632	0.2856	0.0600	0.0581	0.1181						626.1356

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,900	3,900
Other Asphalt Surfaces	5.74	0.00	0.00	67,158	67,158
Total	6.74	0.00	0.00	71,058	71,058

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	0.00	15.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	45.00	0.00	0.00	100.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000

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	1.5939					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	5.3721					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003
Total	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003

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	1.5939					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	5.3721					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	7.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003
Total	6.9661	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.5600e-003

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
Generator Sets	1	24.00	8	500	0.74	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Generator Sets	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286
Total	4.1308	45.2230	20.1252	0.0979		1.3508	1.3508		1.3508	1.3508						11,133.4286

10.0 Vegetation

CONSTRUCTION EMISSIONS SUMMARY (DAILY)

CONSTRUCTION ACTIVITY		CONSTRUCTION EMISSIONS (LBS/DAY)						
		ROG	NOX	CO	SOX	PM10	PM2.5	CO2E
Demolition								
	Onsite	0.4	4.0	3.4	0.0	0.2	0.2	544.7
	Offsite	0.0	0.1	0.5	0.0	0.0	0.0	45.3
	Total	0.4	4.1	3.9	0.0	0.2	0.2	590.1
Grading & Site Work at WWTP								
	Onsite	0.3	3.3	2.6	0.0	4.2	0.6	372.5
	Offsite	0.1	0.2	1.5	0.0	0.1	0.0	138.8
	Total	0.5	3.5	4.1	0.0	4.3	0.7	511.3
Grading & Site Work at ERBs & SDBs								
	Onsite	1.3	13.3	8.9	0.0	6.5	2.6	1003.7
	Offsite	3.6	31.4	50.1	0.1	2.6	1.0	8460.1
	Total	4.8	44.6	59.0	0.1	9.1	3.6	9463.7
Concrete Form Work and Pours								
	Onsite	0.1	1.2	0.9	0.0	0.1	0.1	116.6
	Offsite	0.1	0.1	0.8	0.0	0.1	0.0	69.4
	Total	0.2	1.3	1.6	0.0	0.2	0.1	186.0
Equipment Installation								
	Onsite	0.4	4.8	2.0	0.0	0.3	0.2	369.1
	Offsite	0.1	0.1	0.8	0.0	0.1	0.0	69.4
	Total	0.5	4.9	2.8	0.0	0.3	0.3	438.5
Building Construction								
	Onsite	0.2	1.7	1.2	0.0	0.1	0.1	158.7
	Offsite	0.1	0.1	0.8	0.0	0.1	0.0	69.4
	Total	0.2	1.8	2.0	0.0	0.2	0.1	228.1
Site Piping & Electrical								
	Onsite	0.1	1.2	0.9	0.0	0.1	0.1	119.4
	Offsite	0.1	0.1	0.8	0.0	0.1	0.0	69.4
	Total	0.2	1.3	1.7	0.0	0.2	0.1	188.8
Final Grading & Paving at WWTP								
	Onsite	5.7	7.1	4.3	0.0	0.4	0.4	619.6
	Offsite	0.1	0.2	1.5	0.0	0.1	0.0	138.8
	Total	5.8	7.3	5.8	0.0	0.5	0.4	758.4
Maximum Daily Emissions:		5.8	44.6	59.0	0.1	9.1	3.6	

CONSTRUCTION EMISSIONS SUMMARY (ANNUAL)

PERIOD (DAYS)		CONSTRUCTION EMISSIONS (TONS/YR)						
		ROG	NOX	CO	SOX	PM10	PM2.5	CO2E
								4.94
3	Demolition	0.00	0.01	0.01	0.00	0.00	0.00	0.42
								5.36
								3.38
20	Grading & Site Work at WWTP	0.00	0.03	0.04	0.00	0.04	0.01	1.28
								4.66
								9.11
20	Grading & Site Work at ERBs & SDBs	0.05	0.45	0.59	0.00	0.09	0.04	76.88
								85.99
								1.59
30	Concrete Form Work and Pours	0.00	0.02	0.02	0.00	0.00	0.00	0.96
								2.55
								0.50
3	Equipment Installation	0.00	0.01	0.00	0.00	0.00	0.00	0.10
								0.60
								2.88
40	Building Construction	0.00	0.04	0.04	0.00	0.00	0.00	1.28
								4.16
								1.08
20	Site Piping & Electrical	0.00	0.01	0.02	0.00	0.00	0.00	0.64
								1.72
								0.84
3	Final Grading & Paving at WWTP	0.01	0.01	0.01	0.00	0.00	0.00	0.19
								1.03
Total:		0.07	0.57	0.73	0.00	0.14	0.05	212.14

OPERATIONAL EMISSIONS SUMMARY (DAILY)

ACTIVITY	CONSTRUCTION EMISSIONS (LBS/DAY)						
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2E
Mobile Source	11.39	48.19	23.28	0.1	1.64	1.47	11759.57
Generator	4.13	45.22	20.13	0.1	1.35	1.35	11133.43
Landscape Maintenance	6.97	0	0	0	0	0	0.002

OPERATIONAL EMISSIONS SUMMARY (ANNUAL)

ACTIVITY	CONSTRUCTION EMISSIONS (TONS/YR)						
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2E
Mobile Source	0.03	0.38	0.36	0	0.04	0.02	74.05
Generator	0.02	0.18	0.08	0	0.01	0.01	40.4
Landscape Maintenance	0	0	0	0	0	0	0

OPERATIONAL WWTP PROCESS EMISSIONS - EXISTING LEWISTON PARK MUTUAL WATER COMPANY

PROCESS	TOTAL EMISSIONS (LBS/YR)											
	Total ROG/VOCs	BENZENE	ETHYL-BENZENE	TOLUENE	XYLENES	CHLOROFORM	METHYLENE CHLORIDE	TETRACHLORO-ETHYLENE	1,1,1-TRICHLORO-ETHANE	ACETONE**	METHYL ETHYL KETONE	MIBK**
PRELIMINARY/PRIMARY TREATMENT												
HEADWORKS-NON DUCTED	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GRIT REMOVAL-NON AERATED	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRIMARY SEDIMENTATION	0.800	0.001	0.001	0.004	0.000	0.001	0.002	0.001	0.001	0.102	0.020	0.019
FLOW EQUALIZATION-PRIMARY EFFLUENT	2.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.094	0.019	0.017
BIOLOGICAL TREATMENT												
ACTIVATED SLUDGE-DIFFUSED AIR	3.800	0.034	0.024	0.146	0.140	0.094	0.086	0.170	0.130	0.001	0.000	0.000
POST BIOLOGICAL TREATMENT												
SECONDARY CLARIFIERS	0.240	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.242	0.048	0.044
EFFLUENT FILTRATION	0.012	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHLORINATION	0.018	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.000	0.000	0.000
FINAL EFFLUENT DISCHARGE WEIR	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SOLIDS HANDLING												
DISSOLVED AIR FLOTATION	0.246	0.000	0.000	0.000	0.000	0.072	0.132	0.150	0.192	0.000	0.000	0.000
SLUDGE DIGESTION - AEROBIC	0.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL (LBS/YR):	8.08	0.03	0.02	0.15	0.14	0.17	0.22	0.32	0.32	0.53	0.11	0.10
TOTAL (LBS/DY):	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL (LBS/HR):		0.00000	0.00000	0.00002	0.00002	0.00002	0.00003	0.00004	0.00004	0.00006	0.00001	0.00001
TOTAL (TONS/YR):	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TAC SCREENING RISK ASSESSMENT*

CANCER UNIT RISK/POTENCY FACTOR:	2.90E-05	2.50E-06	0.00E+00	0.00E+00	5.30E-06	1.00E-06	5.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RECEPTOR PROXIMITY ADJUSTMENT FACTOR:	1	1	1	1	1	1	1	1	1	1	1	1
NORMALIZATION FACTOR:	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03
ACUTE EXPOSURE EFFECTS LEVEL	1.30E+03	0.00E+00	3.70E+04	2.20E+04	1.50E+02	1.40E+04	2.00E+04	6.80E+04	0.00E+00	1.30E+04	0.00E+00	0.00E+00
CHRONIC EXPOSURE EFFECTS LEVEL	6.00E+01	2.00E+03	3.00E+02	7.00E+02	3.00E+02	4.00E+02	3.50E+01	1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CARCINOGENIC RISK:	1.73E-03	1.05E-04	0.00E+00	0.00E+00	1.52E-03	3.80E-04	3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL CARCINOGENIC RISK:	6.98E-03	ONSITE	1.74E-03	OFFSITE RECEPTOR								
NON-CARCINOGENIC ACUTE RISK:	4.610E-06	0.000E+00	6.959E-07	1.101E-06	1.930E-04	2.735E-06	0.000E+00	0.000E+00	0.000E+00	1.399E-06	0.000E+00	0.000E+00
TOTAL NON-CARCINOGENIC ACUTE RISK:	2.036E-04											
NON-CARCINOGENIC CHRONIC RISK:	9.99E-06	0.00E+00	8.58E-06	3.46E-06	9.65E-06	9.57E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL NON-CARCINOGENIC CHRONIC RISK:	4.13E-05											
TOTAL NON-CARCINOGENIC RISK:	2.45E-04	ONSITE	6.12E-05	OFFSITE RECEPTOR								

*Based on methodology derived from the CAPCOA Air Toxics "Hot Spots" Program, Facility Prioritization Guidelines (available at website url: <http://www.arb.ca.gov/ab2588/RRAP-IWRA/priguide.pdf>) and risk values obtained from the Consolidated Table of OEHH/ARB Approved Risk Assessment Health Values, February 14, 2011. Available at url: <http://www.arb.ca.gov/toxics/healthval/healthval.htm>.

**The toxicity of acetone is low, and the modeled exposures indicate that it would not pose any significant health risk, even in worst-case scenarios. Based on this information, acetone has been removed from the list of Hot Spots chemicals by the Air Resources Board, Office of Environmental Health Hazard Assessment (OEHH). Accessed September 25, 2011. Air-Hotspots-Acute RELs. Website url: http://www.oehha.ca.gov/air/acute_rels/response4_2.html. Methyl Isobutyl ketone (MIBK) is not currently identified by the OEHH as part of the chemicals to be evaluated as part of the "Hot Spots" program and no health risk values are currently available for use in risk assessment for this chemical.

OPERATIONAL WWTP PROCESS EMISSIONS - PROPOSED PROJECT

PROCESS	TOTAL EMISSIONS (LBS/YR)											
	Total ROG/VOCs	BENZENE	ETHYL-BENZENE	TOLUENE	XYLENES	CHLOROFORM	METHYLENE CHLORIDE	TETRACHLORO-ETHYLENE	1,1,1-TRICHLOR-ETHANE	ACETONE	MEK	MIBK
PRELIMINARY/PRIMARY TREATMENT												
HEADWORKS-NON DUCTED	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GRIT REMOVAL-NON AERATED	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRIMARY SEDIMENTATION	14.000	0.014	0.010	0.063	0.006	0.020	0.035	0.025	0.014	1.785	0.357	0.324
FLOW EQUALIZATION-PRIMARY EFFLUENT	37.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.645	0.328	0.298
BIOLOGICAL TREATMENT												
ACTIVATED SLUDGE-DIFFUSED AIR	66.500	0.595	0.420	2.555	2.450	1.645	1.505	2.975	2.275	0.011	0.002	0.002
POST BIOLOGICAL TREATMENT												
CHLORINATION	0.315	0.000	0.000	0.000	0.000	0.018	0.033	0.022	0.026	0.000	0.000	0.000
SOLIDS HANDLING												
SLUDGE DIGESTION - AEROBIC	3.588	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL (LBS/YR):	132.58	0.61	0.43	2.62	2.46	1.68	1.57	3.02	2.32	5.09	1.02	0.92
TOTAL (LBS/DY):	0.36	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00
TOTAL (LBS/HR):		0.00007	0.00005	0.00030	0.00028	0.00019	0.00018	0.00035	0.00026	0.00058	0.00012	0.00011
TOTAL (TONS/YR):	0.066	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.001	0.003	0.001	0.000

TAC SCREENING RISK ASSESSMENT

CANCER UNIT RISK/POTENCY FACTOR:	2.90E-05	2.50E-06	0.00E+00	0.00E+00	5.30E-06	1.00E-06	5.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RECEPTOR PROXIMITY ADJUSTMENT FACTOR:	1	1	1	1	1	1	1	1	1	1	1	1
NORMALIZATION FACTOR:	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03	1.70E+03
ACUTE EXPOSURE EFFECTS LEVEL	1.30E+03	0.00E+00	3.70E+04	2.20E+04	1.50E+02	1.40E+04	2.00E+04	6.80E+04	0.00E+00	1.30E+04	0.00E+00	0.00E+00
CHRONIC EXPOSURE EFFECTS LEVEL	6.00E+01	2.00E+03	3.00E+02	7.00E+02	3.00E+02	4.00E+02	3.50E+01	1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CARCINOGENIC RISK:	3.00E-02	1.83E-03	0.00E+00	0.00E+00	1.52E-02	2.67E-03	3.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL CARCINOGENIC RISK:	8.00E-02	ONSITE	2.00E-02	OFFSITE RECEPTOR								
NON-CARCINOGENIC ACUTE RISK:	8.026E-05	0.000E+00	1.212E-05	1.911E-05	1.920E-03	1.923E-05	0.000E+00	0.000E+00	0.000E+00	1.337E-05	0.000E+00	0.000E+00
TOTAL NON-CARCINOGENIC ACUTE RISK:	2.064E-03											
NON-CARCINOGENIC CHRONIC RISK:	1.74E-04	0.00E+00	1.49E-04	6.01E-05	9.60E-05	6.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL NON-CARCINOGENIC CHRONIC RISK:	5.47E-04											
TOTAL NON-CARCINOGENIC RISK:	2.61E-03	ONSITE	6.53E-04	OFFSITE RECEPTOR								

*Based on methodology derived from the CAPCOA Air Toxics "Hot Spots" Program, Facility Prioritization Guidelines (available at website url: <http://www.arb.ca.gov/ab2588/RRAP-IWRA/priguide.pdf>) and risk values obtained from the Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. February 14, 2011. Available at url: <http://www.arb.ca.gov/toxics/healthval/healthval.htm>.

**The toxicity of acetone is low, and the modeled exposures indicate that it would not pose any significant health risk, even in worst-case scenarios. Based on this information, acetone has been removed from the list of Hot Spots chemicals by the Air Resources Board. Office of Environmental Health Hazard Assessment (OEHHA). Accessed September 25, 2011. Air-Hotspots-Acute RELs. Website url: http://www.oehha.ca.gov/air/acute_rels/response4_2.html. Methyl Isobutyl ketone (MIBK) is not currently identified by the OEHHA as part of the chemicals to be evaluated as part of the "Hot Spots" program and no health risk values are currently available for use in risk assessment for this chemical.

AB2588 Health Risk Screening/Facility Risk Prioritization

AB2588 requires the prioritization of facilities as either high, intermediate, or low priority to determine if a facility needs to conduct a health risk assessment. Facilities exceeding total facility score of 10 are considered to potentially exceed the MBUAPCD's significance thresholds for human health risk and would be considered "high priority." A more detailed health risk assessment would be required for "high priority" facilities. Toxics Best Control Technology (TBACT) is typically required for facilities identified as "intermediate priority" facilities. "Low priority" facilities are typically not considered to result in a significant impact.

Project: Lewiston WWTP Project
Source: Emergency Generator
Receptor Distance: 15 m
Release Height: 4 m
Facility Risk Category: Intermediate Priority
Exceeds Thresholds/High Priority?: No

Total Facility Score	Category
TS > 10	High Priority
1 < TS ≤ 10	Intermediate Priority
TS ≤ 1	Low Priority

The spreadsheet below was based on the CAPCOA - Dispersion Adjustment Procedure.

$$\text{cancer TS} = \{ \sum (E_c) * (P_c) * (RP) * (D_h) \} * (128)$$

$$\text{acute TS} = \sum (E_c) / (P_c) * (RP) * (D_h) * (25)$$

$$\text{chronic TS} = \sum (E_c) / (P_c) * (RP) * (D_h) * (2.5)$$

Emittent ID No. (CAS)	Substance Name	Degree of Accuracy (lb/yr)	E _c			P _c Unit Risk Value (ug/m ³) ⁻¹ (d)	Chronic		Acute		D _h Dispersion Adjustment Factors (h)	RP Receptor Proximity (i)	Total Scores		
			Annual (lb/yr) (a)	Avg Hourly (lb/hr) (b)	Max Hourly (lb/hr) (c)		Chronic REL (ug/m3) (e)	Target Organ (f)	Acute REL (ug/m3) (g)	Target Organ (f)			Cancer 3.66	Chronic 0.72	Acute 0.00
			Individual Priority Scores											Cancer T _{cancer} (j)	Chronic T _{chronic} (k)
9901	diesel exhaust (particulate emissions)		1.59E+00	2.40E-02	2.40E-02	3.00E-04	5.00E+00	R	0.00E+00		60	1.00	3.66E+00	7.20E-01	
						0.00E+00	0.00E+00		0.00E+00		60	1.00			
						0.00E+00	0.00E+00		0.00E+00		60	1.00			
						0.00E+00	0.00E+00		0.00E+00		60	1.00			

Notes:

Target Organs (TO)	Facility Prioritization Scores		
	cancer	chronic	acute
Alimentary Tract (A)		0.00	0.00
Cardiovascular (C)		0.00	0.00
Eye (E)		0.00	0.00
gastrointestinal/liver (G)		0.00	0.00
Headache/Nausea (HN)		0.00	0.00
Hematological (H)		0.00	0.00
Immune System (I)		0.00	0.00
Kidney (K)		0.00	0.00
Nervous System (N)		0.00	0.00
Reproductive/Developmental (RD)		0.00	0.00
Respiratory (R)		0.72	0.00
Skin (S)		0.00	0.00
Total Cancer:	3.663		

(d) URVs = OEHHA/ARB Consolidated Table, updated May 13, 2015
 (e) Chronic RELs = OEHHA/ARB Consolidated Table, updated May 13, 2015
 (f) The impacts of acute and chronic non-cancer compounds are organ-specific. Therefore chronic non-cancer and acute prioritization scores are organ-specific. Those facility scores include the total contributions to specific target organs (TO) and are not just totals for each category.
 (g) Acute RELs = OEHHA/ARB Consolidated Table, updated May 13, 2015
 * chromium 6+ (hexavalent) includes barium chromate, calcium chromate, lead chromate, sodium dichromate or strontium chromate assuming exposure by inhalation
 ** unit risk value for dioxins and furans is listed for the worst case. If information on individual compounds is known, look up specific risk values in the Consolidated Table of OEHHA/ARB approved risk assessment health values
 *** low risk, for use in cases where congeners with more than four chlorines comprise less than one-half percent of total polychlorinated biphenyls
 **** high risk, for use in cases where congeners with more than four chlorines do not comprise less than one-half percent of total polychlorinated biphenyls