EASTERN KERN
AIR POLLUTION CONTROL DISTRICT

2024
ANNUAL AB 2588 AIR TOXICS REPORT

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OVERVIEW OF AIR TOXICS INFORMATION AND ASSESSMENT ACT

The Eastern Kern Air Pollution Control District (District) is a public health agency whose mission is to improve the health and quality of life for all residents in eastern Kern County through efficient and effective air pollution reducing strategies. Under Assembly Bill (AB) 2588 (Air Toxics Hot Spots Information and Assessment Act), the District works with facilities to quantify emissions of air toxics, determines the health risk caused by those emissions, reports emissions and notifies any significant risks through written public reports and neighborhood public meetings, and as required, takes steps to reduce such risks.

The Air Toxics Information and Assessment Act became law in 1987 when Governor Deukmajian signed Assembly Bill 2588 (AB2588). The purpose of the program is the following: 1) inventory air toxics emissions, 2) determine if these emissions are causing localized ambient concentrations of air toxics high enough to expose individuals or population groups to significant health risk, and 3) inform the public of significant health risk.

To accomplish this, an initial inventory of air toxic emissions and assessment of risk was required of all facilities 1) emitting greater than 10 tons/yr of “criteria” pollutants (oxides of nitrogen, volatile organic compounds, oxides of sulfur, and particulate matter) and/or 2) certain “named” categories of facilities emitting less than 10 tons/yr of criteria pollutants, but handling materials which could pose significant risk. (See Pages 4 and 5 for changes to these requirements.)

Over the life of the program, numerous types of facilities having potential to emit significant levels of air toxics have been identified and their impact on health risk has been quantified. Consequently, the most recent California Air Resources Board (ARB) air toxics guidelines list (August 27, 2007) specific facilities subject to air toxics emissions inventorying and reporting (see Emission Inventory Criteria and Guidelines for the Air Toxics "Hot Spots" Program Report, Appendix C – web site: http://www.arb.ca.gov/ab2588/2588guid.htm). These guidelines also place facilities into categories for purposes of update reporting based on calculated risk, and exempt “low priority” facilities from further update reporting. For facilities still subject to the program, these guidelines specify facility information to be reported, toxic substances to be addressed, and test methods to be used for quantifying emissions. The final version of the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments developed by the Office of Environmental Health Hazard Assessment (OEHHA) and ARB was made available to the public in February of 2015. OEHHA had earlier developed three Technical Support Documents (TSDs) which provided the scientific basis for values used in assessing risk from exposure to facility emissions. The three TSDs describe non-cancer risk assessment (derivation of acute, 8-hour and chronic reference exposure levels), derivation of cancer potency factors, and exposure assessment methodology including stochastic risk assessment.

State Guidelines allow local air districts such as Eastern Kern Air Pollution Control District (District) to utilize air toxics analyses conducted as part of its Rule 210.1 New and Modified Source Review (NSR) process, in-lieu of requiring separate quantification of air toxics emissions to satisfy AB2588. Guidelines require the NSR permit contain conditions to ensure calculated toxic risk is not exceeded. Providing integration of the AB2588 with District’s

permitting program is a time and cost savings both for the District and affected facilities, while neither public health nor the intent of either program is compromised.

Some of the District's smallest emitters are subject to the AB2588 program, including auto body shops, dry cleaners, and gasoline retailers. To provide some relief from the burden of reporting, these sources are identified in the Program as "industry-wide" sources. ARB, in cooperation with the California Air Pollution Control Officers Association (CAPCOA), has adopted and continues to develop health risk guidelines, risk reduction plans, and audit plans that Districts may utilize to assess, reduce, and verify toxics emissions from industry-wide sources. The "Auto Body Shop Industry-Wide Risk Assessment Guidelines" was approved by CAPCOA September 26, 1996, and the "Gasoline Service Station Industry-Wide Risk Assessment Guidelines" was approved in December, 1997 (Appendix E updated in November 2001). The "Perchloroethylene (Perc) Dry Cleaner Industry-Wide Risk Assessment" was never finalized; however, the California Air Resources Board (ARB) approved amendments to the Dry Cleaning Air Toxic Control Measure (ATCM) and adopted requirements for Perc manufacturers and distributors on January 25, 2007. The amendments required phasing out the use of Perc dry cleaning machines and related equipment by January 1, 2023. Therefore, all District facilities have phased out Perc and transitions to hydrocarbon cleaning solvents.

ASSESSMENT OF HEALTH RISKS

Potential public health risk of each facility subject to the program is quantified by using dose-response data developed from animal and/or human studies. Dose is calculated using mathematical modeling techniques, and is dependent upon the following data: emission rate of each toxic substance; the toxicity (reference exposure level) of the substance; release point characteristics, including stack height, diameter, gas temperature, and gas velocity; meteorological conditions, including ambient temperature, wind speed, and mixing height; and characteristics of the surrounding terrain. Response is based upon "potency slope factors", approved by the U.S. Environmental Protection Agency (U.S. EPA) or OEHHA, derived from health impact studies that have undergone public and peer review. Currently, the "Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" (Guidance Manual), published by OEHHA in 2015, is utilized for preparing health risk assessments. The Guidance Manual is a concise description of algorithms, recommended exposure variables, cancer, and non-cancer health values, and the air modeling protocols needed to perform a health risk assessment. The Guidance Manual updates the previous version (2003), and reflects advances in the field of risk assessment along with explicit consideration of infants and children.

Health risk can be quantified using three different methods: 1) a "prioritization score", 2) a screening level risk assessment, or 3) refined risk assessment modeling. All three methods make use of mathematical dispersion models approved by ARB as well as U.S. EPA and/or OEHHA approved potency values. Dispersion models are computerized, as several thousand calculations are often necessary to yield significant results. In order to assist the districts in prioritizing facilities, CAPCOA, in cooperation with OEHHA and ARB, developed the Air Toxics "Hot Spots" Program Facility Prioritization Guidelines in July 1990. The guidelines provide suggested procedures in performing risk assessment. In 2015, CAPCOA updated these guidelines to incorporate OEHHA revisions to risk assessment methodology.

The final version of CAPCOA Air Toxics "Hot Spots" Facility Prioritization Guidelines was made available to the public in August 2016 (website: http://www.capcoa.org).

Determining a facility's "prioritization score" (PS) is the least complex and most health conservative way of characterizing risk. The procedure incorporates many health conservative assumptions to insure potential risk is not underestimated. The score is calculated using either the Emissions and Potency Procedure (EPP) or the Dispersion Adjustment Procedure (DAP), which are described in the previously mentioned CAPCOA guidelines. The EPP considers only emission rate, pollutant potency, and proximity of receptors, while the DAP also considers dispersion due to release height. The prioritization process is summarized below:

Table1: Prioritization Thresholds

Prioritization Thresholds	Priority Category	Category Requirements
≤ 1	Low Priority	Facility is conditionally exempt from further AB2588 requirements
>1 and ≤ 10	Intermediate Priority	Facility is required to provide an update summary on a quadrennial basis
> 10	High Priority	Facility is required to perform a Health Risk Assessment

Due to its inherent conservatism, if the prioritization score indicates significant risk, a more detailed risk assessment model is calculated. The next level of assessment is the "screening model", and includes assumptions to ensure that, regardless of source location or meteorological conditions, assessed risk will not be underestimated. Like the prioritization score model, the "screen model" does not account for multiple release points; however, it does account for dispersion of pollutants using meteorological data and provides for additional detail regarding emission release characteristics. Results of a screening dispersion analysis are used as input for an exposure assessment model to yield carcinogenic (cancerous) and non-carcinogenic health effects.

To best assess air quality impact of a facility on its nearby receptors, a "refined risk assessment model" is used. This model is capable of representing the combined effect of multiple emission points, varying terrain, and multiple receptors at discrete locations. The dispersion model used in refined modeling also utilizes local meteorological data. Refined risk analyses are complex and costly, but produce the most true-to-life assessment of risk. The refined risk assessment also utilizes conservative assumptions; therefore, calculated risk is not underestimated. The HRA thresholds are summarized in the next page:

Table 2: HRA Thresholds

Health Risk Thresholds	Risk Category	Category Requirements
Cancer risk < 1 in a million, and Total hazard index of < 0.1	Low Risk	Facility is conditionally exempt from further AB 2588 requirements
1 ≤ Cancer risk <10 in a million, or 0.1 ≤ Total hazard index ≤ 1.0	Intermediate Risk	Facility is required to provide an update summary on a quadrennial basis
Cancer risk ≥ 10 in a million, or Total hazard index of > 1.0	Public Notification Required	Facility is required to go through the public notification process
Cancer risk > 100 in a million, or Total hazard index of > 5.0	Risk Reduction	Facility is required to go through the public notification process and prepare a Risk Reduction Plan

DISSEMINATION OF TOXIC EMISSIONS AND RISK INFORMATION

All information collected during this process is disseminated to the public through public meetings where results are presented and discussed. Additionally, the Act specifies all persons located in areas where significant adverse health effects may occur, be individually notified of this risk and permitted an opportunity to discuss estimated risk with the District and the emitting facility. Levels of risk determined by District's Board of Directors to be significant for purposes of AB2588 public notification are: 1) a cancer risk exceeding 10 in 1 million, or 2) a ratio of the chronic or acute exposure to the recommended exposure level (referred to as a "hazard index") exceeding 1.0.

These levels of significance have also been chosen by most other California air districts, and are values recommended by CAPCOA. In 2021, a facility in the District exceeded a hazard index of 1. 0 for the first time in the program's history. However, that facility has since reduced its toxic health risk by installing additional controls. Therefore, currently no District facilities exceed cancer risk of greater than 10 in 1 million or an acute/chronic hazard index above 1.

As with all emissions information accumulated by the District, Eastern Kern's air toxic emission inventory is public information and available for public review. The procedure of adoption and modification of the guidelines and fee regulations is a public process and includes noticing, workshops, periods for public comment, and eventual adoption at a public District board meeting. Before District procedures were adopted by the Board in January 1994, the draft was subject to a public process. All affected facilities were notified in writing, and the public was notified (an announcement was published in the District newsletter and "The Bakersfield Californian") of a workshop in Mojave. Public comments were received for 30 days following the workshop, and the revised document was mailed to all parties attending the workshop. The District adoption hearing was "noticed" in the District newsletter and "The Bakersfield Californian" and public comments were received at the District Board adoption

hearing. These Public Notification Procedures provide a mechanism to establish a level of significance for cancerous and non-cancerous health risk and identify the procedure by which individuals exposed to significant risk will be notified of this risk by both the District and the facility. Notified individuals are offered the opportunity to attend a public meeting at which results are further discussed.

This annual report ranks and identifies facilities according to cancer and non-cancer risk posed, and describes toxic control measures. After presentation at a public hearing, it is distributed to the Kern County Board of Supervisors, city councils in the District, the County Health Officer, and ARB.

In the fall of 1998, ARB increased availability of toxics inventory data to the public by posting this data on its web site (www.arb.ca.gov/ab2588/ab2588.htm), ARB regularly updates this information. The District regularly reviews facility data and revises the inventory to reflect changes made at facilities within the District. This Annual Report includes updates to toxic information for core facilities and new/modified permitted sources.

EVOLUTION OF AIR TOXICS PROGRAM

The Air Toxics Program has been implemented for over three decades (first reports were submitted in 1990), and much information has been gathered about toxic emission sources and health impacts of air pollutants. The program has been modified over time as better information has become available.

1996 Guidelines Amendment: In May 1996, the "ARB Emission Inventory Criteria and Guidelines" were modified; in September 1996, Assembly Bill 564 became law exempting additional low risk facilities from the program. Revised guidelines and mandates of AB564 now base air toxic reporting requirements on the calculated health risk associated with a facility's toxic emissions rather than total annual emissions of "criteria" pollutants (oxides of nitrogen, oxides of sulfur, particulate matter, carbon monoxide, and volatile organic compounds). Therefore, after initial submittal of a toxic emission inventory plan and report, only those facilities determined to pose intermediate or high level health risk are required to submit a quadrennial update report. This update report, if required, must quantify the following: 1) emissions from units which have an emission increase of greater than 10%; 2) emissions from units emitting a newly listed air toxic air contaminant; 3) emissions of a pollutant for which the unit risk value has been revised; or 4) emissions from new and modified emission units which may result in the facility changing reporting categories due to increased health risk.

Per the revised guidelines, facilities determined to be low level risk are exempt from future reporting requirements and fees, provided: 1) the nearest receptor is no closer, 2) there are no changes to risk calculation procedures, and 3) there are no changes to health effect values which would result in the facility being reclassified as intermediate or high level risk.

2015 OEHHA HRA Guidelines – In 2015, the Office of Environmental Health Hazard Assessment (OEHHA) adopted updated Health Risk Assessment (HRA) guidelines. The District adopted revised prioritization and HRA guidelines during reassessment of health risks for certain large facilities using the updated OEHHA guidelines. The District continues to

assess health risks associated with new facility emissions and other smaller source categories using the updated guidelines.

2024 AB 2588 EICG and CTR Amendments – On November 19, 2020, CARB adopted amendments to the Emission Inventory Criteria and Guidelines (EICG) to harmonize with the Criteria Pollutant and Toxics Emissions Reporting (CTR) regulation. The CTR and EICG regulations were approved with changes by the Office of Administrative Law and filed with the Secretary of State on March 21, 2024. The amendments to CTR were retroactively effective January 1st, 2024. The purpose of the CTR regulation is to establish a uniform statewide system for the annual reporting of criteria and toxic air contaminants emitted by District permitted facilities.

Amendments to the EICG will supplement the AB2588 program in various ways including but not limited to the following: (1) provide additional consideration factors for exempting facilities and reinstating previously-exempt facilities; (2) require reporting of 900+ new substances and three broad functional groups of chemicals found in the emissions from facilities; update risk screening modeling approaches; (3) align with the reporting requirements in the CTR. 4) specify information a facility operator must include in a facility's air toxics emission inventory plan and inventory report; 5) identify specific classes of facilities that emit less than ten tons per year of criteria pollutants that are subject to the “Hot Spots” program and specifies their emission inventory reporting requirements; 6) specify source testing requirements, acceptable emission estimation methods, and the reporting formats to be used; 7) establish groups of the substances to be inventoried; 8) designate facilities into levels for purposes of update reporting, based on prioritization scores, risk assessment results, or *de minimis* thresholds; 9) exempt "low level" facilities from further update reporting unless specified reinstatement criteria are met, and specifies the update reporting requirements for other facilities; 10) specify information a facility operator must include in a facility's update to their emission inventory; and 11) include provisions for integrating “Hot Spots” reporting with other district programs if specified criteria are met.

Lastly, for a new or modified facility has been subject to New and Modified Source Review (District Rule 210.1), health risk presented by all potential TAC emissions will be evaluated as part of the permitting process. The District has determined that a full risk assessment may be used in lieu of an air toxic plan and report.

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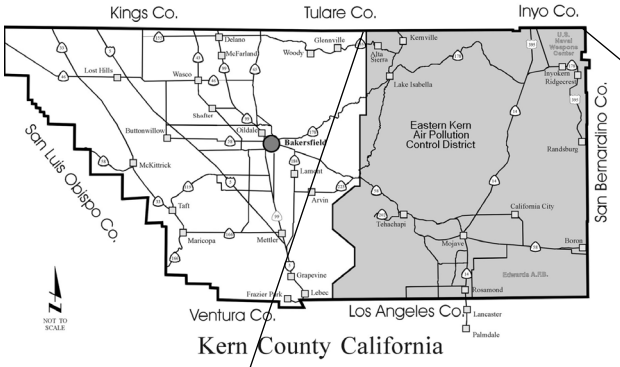
CURRENT STATUS OF EASTERN KERN TOXIC EMISSION SOURCES

Eastern Kern Air Pollution Control District has jurisdiction of the geographic area shown below.



The District's jurisdiction encompasses 3,704 square miles and has a population of approximately 174,000. The area includes two military bases (Edwards Air Force Base and Naval Air Weapons Station at China Lake), and the cities and communities of Lake Isabella, Tehachapi, Mojave, Rosamond, California City, Ridgecrest, and Boron in the high desert region of Kern County. Overall, the District's sparsely populated area provides significant dispersion potential for most sources within the District's jurisdiction.

The District has assessed potential health risk from facilities through implementation of ARB's "Emission Inventory Criteria and Guidelines (EICG)" Each air toxics emission source within the District was placed into one of four categories, based upon potential health risk created by the facility.

Category No. 1 (High Level Risk)

No facilities have an approved health risk assessment exceeding 10 in one million or non-cancer (acute and chronic risk) hazard index exceeding 1.0.

Category No. 2 (Intermediate Level Risk)

The following facilities have either: 1) an approved health risk assessment showing increased cancer risk is less than 10 in 1 million and a total hazard index (THI) less than 1.0, or 2) a prioritization score less than 10.0, but more than 1.0 for both cancer and non-cancer effects (health risk assessment not required).

Table 1

	Health Risk Assessment			Prioritization Score	
	Cancer	Non-Cancer		Cancer	Non-Cancer
Facility Name		Chronic	Acute		
California Portland Cement Co.	Not Required	Not Required		3.77	0.98
Edwards Air Force Base	Not Required	Not Required		9.87	0.04
Golden Queen Mining Co.	Not Required	Not Required		6.20	2.00
Innovative Coatings Technology (INCOTEC)	Not Required	Not Required		3.14	0.09
NASA Armstrong Flight Research Center	Not Required	Not Required		7.18	0.01
Naval Air Weapons Station	Not Required	Not Required		2.21	1.26
National Cement Company	Not Required	Not Required		4.29	0.31
PRC-DeSoto International	Not Required	Not Required		7.02	0.70
Scaled Composites	Not Required	Not Required		1.61	8.92
Tehachapi Cement Plant	5.25 in 1 million	0.14	0.33	12.21	0.84
Tehachapi Cummings County Water District (TCCWD) - Pump Plant #4	Not Required	Not Required		1.04	0.91

Facilities in *italic* font were re-evaluated based on 2024 emission data.

Additionally, facilities that would be low priority but emit 5 or more tons per year of any one hazardous air pollutant (HAP) or 12.5 tons of total HAP are considered intermediate facilities.

Category No. 3 (Low Level Risk)

The following facilities have either: 1) a prioritization score equal to or less than 1.0 for both carcinogenic and non-carcinogenic pollutants, 2) an approved health risk assessment showing less than 1 in 1 million increased cancer risk and total hazard index less than 0.1 for each toxicological endpoint, 3) a Rule 210.1 health risk analysis showing cancer risk less than 1 in 1 million and total hazard index less than 0.1, or 4) a "de minimis" classification as defined in ARB's Guidelines.

Table 2

Facility Name	Health Risk Assessment		Prioritization Score	
	Cancer	Non-Cancer	Cancer	Non-Cancer
California Correctional Institution (Tehachapi)	Not Required		0.002	0.001
Commodity Resource & Environmental	HRA Not Required		0.08	0.02
Indian Wells Valley Cremation	HRA Not Required		Exempt as "de minimis"	
Kemira Water Solutions	0.11 in 1 million	0.07	23.02	1.22
Kern County Waste Management (Lake Isabella Landfill)	HRA Not Required		0.47	0.02
Kern County Waste Management (Ridgecrest Landfill)	HRA Not Required		0.38	0.02
Kern County Waste Management (Tehachapi Landfill)	HRA Not Required		0.00	0.20
Ridgecrest Regional Hospital	HRA Not Required		Exempt as "de minimis"	
Stratolaunch, LLC	Not Required		0.08	0.04
Tehachapi Cummings County Water District (TCCWD) - Pump Plant #2	HRA Not Required		0.08	0.17
TCCWD- Pump Plant #3	HRA Not Required		0.57	0.91
Trical, Inc.	HRA Not Required		0.09	0.89
U.S. Borax, Incorporated	0.05 in 1 million		0.08	0.01
Wastewater Treatment Plants (All)	HRA Not Required		Exempt as "de minimis"	

De minimis: The probability of the facility to present a health risk the public is very small; therefore, calculating a prioritization score for the facility is not effective use of District resources

Category No. 4 (New Facilities and Modified Facilities with Increased Emissions)

During 2024 calendar year, District staff issued 168 Authority to Construct permits for projects subject to Rule 210.1 (NSR); the majority of these projects had no significant impact on facility toxic air contaminant (TAC) emissions. Some of the most frequent projects with potentially significant toxic emissions are facilities proposing to install diesel piston engines. CARB and OEHHA have determined that diesel exhaust presents a significant carcinogenic and non-carcinogenic health risk due to diesel particulate matter (DPM) emissions. DMP consists of small particles less than 2.5 microns in diameter which are made up of hundreds

of different toxic compounds including but not limited to carbon, ash, metallic particles, sulfates, and silicates. All permitted diesel engines have a carcinogenic risk of less than 10 in 1 million and a non-carcinogenic hazard index of less than 1.0. Natural gas and liquefied petroleum gas (LPG) fired engines emit significantly less TAC and also yielded carcinogenic risk of less than 10 in 1 million and a non-carcinogenic hazard index of less than 1.0. A summary of the number of internal combustion engines permitted during the calendar year 2024 is listed in Table 3; these do not include agricultural engine registrations.

Table 3

Rating Range (Brake horsepower)	Number of units
50 – 99	21
100 - 299	24
300 - 599	18
600 - 699	1
700 - 799	4
800 - 899	5
900 - 999	0
1000 - 4999	35
5000 - 9999	0
10000 or greater	0
Total	108

In addition to piston engines, the following new and modified facilities that emit toxic air contaminants were permitted during 2024:

Aggregate Processing/Asphalt Handling Facilities:
California Portland Cement applied for a new flexibility ore crushing and handling system. The ore crushing and handling operation is expected to release toxic air contaminants. A prioritization risk screening showed low priority to nearest offsite receptors. Therefore, significant health risk to the community at large is not expected.

Abrasive Blasting:
Stratolaunch applied for new abrasive blasting cabinet. Abrasive blasting can generate TAC emissions in the form of particulates from either the blasting media used or form the surface being abraded. Prioritization scores showed “low priority” for carcinogenic scores and non-carcinogenic scores at the permitted 500 hours of operation per year. Therefore, emissions from abrasive blasting booths are not expected to pose a significant health risk to the community at large.

Surface Coating Operations:
Two new surface coating operations were permitted in the District during 2024. Fabricor Products applied to for a new automotive spray booth (powder coating) Authority to Construct located in Rosamond. The proposed coatings did not contain toxic air contaminants; therefore, a significant health risk to the community was not expected.

See Empire dba: Hydrocrome also received a permit to move/transfer their surface coating operation to a new location. The surface coating operation is controlled by overspray

collection system equipped with particulate filters. The proposed coatings contain TACs; therefore, a prioritization score was obtained for spray coating operation. Prioritization scores showed “low priority” for carcinogenic scores and non-carcinogenic scores. Therefore, the proposed coating operations were not anticipated to pose a significant health risk to the community at large.

Rocket Engine Testing Operations

Impulse Space Systems applied for a new rocket engine test stand Authority to Construct (ATCs) in 2024. TAC emissions are expected from the proposed rocket testing operation. Therefore, a prioritization score was obtained for the proposed operation. Prioritization scores showed “low priority” for carcinogenic scores and non-carcinogenic scores. Hence, emissions from the proposed rocket testing operation are not expected to pose a significant health risk to the community at large.

Evolution Space also applied for a new rocket engine test stand Authority to Construct (ATCs). TAC emissions are expected from combustion of the solid fuel (grain mixture). A health risk prioritization revealed intermediate priority for acute health risk due to emissions in the form of HCL. However, upon considering other factors the proposed operation is not expected to pose a significant risk. These factors include but not limited to wind direction, work schedule, and receptor distance. The predominant wind direction indicates that the nearest offsite receptor is upwind from proposed operation. The nearest work receptor is also not expected to be present while testing is being conducted. Therefore, the rocket engine testing operation is not expected to pose a significant health risk to the community at large.

Other Miscellaneous Operations:

Other projects with an increase in TAC emissions include, concrete batching operations, woodworking operations, and a rock drilling operations. These projects were deemed low priority, and therefore do not pose significant health risks to the surrounding communities at large.

Core Facility Updates

Core facilities subject to quadrennial updates and updated this year include the following:

California Portland Cement Co (CalPortland).

CalPortland is one of three portland cement manufacturing plants in the District and is located west of Mojave. The nearest worker receptor is located at a distance greater than 2,000-m from the plant and the nearest residential receptor is located at least 10,000-m from the facility. TAC emissions from the facility were determined based on calendar year 2024 activities. Prioritization score provided by facility was based on emissions from the following sources:

- Quarry (mining)
- Loading/Dumping
- Crushing
- Raw Material Handling and Storage Piles
- Pre-blending

- Raw mill
- Pyroprocessing (pre-heater, pre-calciner, kiln)
- Fuel System
- Clinker Storage
- Finish Mills
- Cement handling/shipping

CalPortland submitted prioritization results using the Hotspots Analysis and Reporting tool (HARP2) Emissions Inventory Module. The prioritization showed that the primary drivers of carcinogenic risk (>45% of prioritization score) include beryllium, arsenic, cadmium, hexavalent chromium, and benzene from combustion of fuels in the kiln. Non-cancer risk is also driven (>83% of prioritization score) by fuel combustion in the kiln, primarily from manganese, beryllium, hydrogen chloride, mercury and nickel emissions. Overall, both carcinogenic and non-carcinogenic risk were deemed to be intermediate priority (prioritization score less than 10) based on prioritization scores. Therefore, CalPortland will continue to be subject to quadrennial updates to health risk prioritization.

Golden Queen Mining Company

Golden Queen Mining Company operates a gold & silver mining operation at Soledad Mountain, located southwest of Mojave. The nearest worker receptor is located more than 1500-m from the plant and the nearest residential receptor is located at least 500-m from the facility. TAC emissions from the facility were determined based on calendar year 2024 activities.

Prioritization score was based on emissions from the following sources at the facility:

- Quarry (Drilling and blasting)
- Heavy Duty Offroad Mining Equipment
- Loading/Dumping
- Crushing of ore
- Cyanide heap leaching
- Merrill-Crowe Facility
- Fuel dispensing
- Stationary diesel engines

Based on toxic emissions submitted, prioritization results were generated using the Hotspots Analysis and Reporting tool (HARP2) Emissions Inventory Module. The primary drivers of carcinogenic risk (>98% of prioritization score) are diesel particulate matter from diesel engines and toxic metals including arsenic, cadmium, nickel, and beryllium found in the ore during processing. Noncancer risk is driven (>75% of prioritization score) by arsenic and respirable crystalline silica found in the ore during mining and processing (crushing, conveying, and road transportation). Overall, both carcinogenic and non-carcinogenic risk were deemed to be intermediate priority (prioritization score less than 10) based on prioritization score. Therefore, Golden Queen Mining was classified as an “intermediate facility” and subject to quadrennial updates to health risk prioritization.

National Cement Co (NCC).

National cement is also one of three portland cement manufacturing plants in the District and is located just east of Lebec. The nearest worker receptor is located approximately 3000-m

from the plant and the nearest residential receptor is located at least 8000-m from the facility. TAC emissions from the facility were determined based on calendar year 2024 activities. Prioritization score was based on emissions from the following sources at the facility:

- Quarry (mining)
- Loading/Dumping
- Crushing
- Raw Material Handling and Storage Piles
- Pre-blending
- Raw mill
- Pyroprocessing (pre-heater, pre-calciner, kiln)
- Fuel System
- Clinker Storage
- Finish Mills
- Cement Handling/shipping

National Cement submitted prioritization results using the Hotspots Analysis and Reporting tool (HARP2) Emissions Inventory Module. The primary drivers of carcinogenic risk (>62% of prioritization score) include beryllium, arsenic, cadmium, hexavalent chromium, and benzene from combustion of fuels in the kiln and combustion of diesel fuel in piton engines. Non-cancer risk is also driven (>50% of prioritization score) primarily from emission of methyl bromide, acrolein, formaldehyde, sulfuric acid, benzene, Mercury, and ammonia resulting from combustion in the kiln and of diesel fuel in piston engines. Overall, both carcinogenic and non-carcinogenic risk were deemed to be intermediate priority (prioritization score less than 10) based on prioritization scores. Therefore, National Cement will continue to be subject to quadrennial updates to health risk prioritization.

Naval Air Weapons Station (NAWS)

NAWS supports the Navy's research, development, acquisition, testing and evaluation (RDAT&E) of cutting-edge weapons systems for the fighter jets. It is located in China Lake near the city of Ridgecrest. TAC emissions from the facility were determined based on calendar year 2024 activities. Prioritization score was based on emissions reported by NAWS from the following sources at the base:

- Paint spray booths
- Natural gas fired boilers
- Gasoline, diesel and propane engines
- Degreasing and solvent cleaning operations
- Gasoline storage and dispensing operations
- Abrasive blasting operations

About 98 different TACs were reported and analyzed to determine the health risks from the facility. Numerical results for the health risk prioritization are listed above in Table 1 [under Category No. 2 (Intermediate Level Risk)].

The primary drivers of carcinogenic risk (>95% of prioritization score) are Diesel Particulate Matter (DPM) from diesel combustion in internal combustion piston engines, as well as

hexavalent chrome emissions from surface coating operations. All Diesel engines and surface coating operation are located at least 500-m from nearest off-site receptors. The primary driver for non-cancer risk is driven (>90% of prioritization score) by diesel and propane combustion from engines, primarily from acrolein, benzene, formaldehyde, and acetaldehyde emissions. Overall, both carcinogenic and non-carcinogenic risk were deemed to be intermediate priority (prioritization score less than 10) based on prioritization score. Therefore, NAWS will continue to be subject to quadrennial updates to health risk prioritization.

PRC-DeSoto International

PRC DeSoto operates a sealants and coatings manufacturing facility located in Mojave. The facility serves customers in the aerospace industry. The nearest worker receptor is located 300-m from the plant and the nearest residential receptor is located approximately 575-m from the facility. TAC emissions from the facility were determined based on calendar year 2024 activities. Air toxic emissions from PRC-Desoto's facility are generated by several types of point sources, which are either part of the facility's infrastructure (emergency generator, firewater pump etc.) or part of, or in support of, the sealant and coatings production operation. Sources of toxic emissions are listed below:

- Diesel engines with fire pumps or emergency generators
- Boilers
- Oil heaters
- Blending/mixing equipment and associated dust collectors
- Cooling towers associated with reactors and mixing equipment
- Spray booths
- Solvent tank truck

PRC De-Soto submitted prioritization results using the Hotspots Analysis and Reporting tool (HARP2) Emissions Inventory Module. The primary drivers of carcinogenic risk (> 70% of prioritization score) are strontium chromate, barium chromate, and calcium chromate used in coating formulation for their anti-corrosion properties and sprayed in their permitted spray booth. Non-cancer risk is driven (>60% of prioritization score) by Diisocyanetes in sealant and coating formulations in their mixing tanks. Overall, both carcinogenic and non-carcinogenic risk were deemed to be intermediate priority (prioritization score less than 10) based on prioritization score. Therefore, PRC De-Soto will continue to be subject to quadrennial updates to health risk prioritization.

Tehachapi Cement Plant

Tehachapi Cement is one of three portland cement manufacturing plants in the District and is located east of Tehachapi. The nearest worker receptor is located at a distance greater than 1,000-m from the plant and the nearest residential receptor is located at least 1,500-m from the facility. TAC emissions from the facility were determined based on calendar year 2024 activities. Prioritization score provided by facility was based on emissions from the following sources:

- Quarry (mining)
- Loading/Dumping

- Crushing
- Raw Material Handling and Storage Piles
- Pre-blending
- Raw mill
- Pyroprocessing (pre-heater, pre-calciner, kiln)
- Fuel System
- Clinker Storage
- Finish Mills
- Cement handling/shipping

Tehachapi Cement submitted prioritization results using the Hotspots Analysis and Reporting tool (HARP2) Emissions Inventory Module. The prioritization showed that the primary drivers of carcinogenic risk (>57% of prioritization score) include hexavalent chromium, Cobalt, and formaldehyde emissions from combustion of fuels in the kiln. Non-cancer risk is also driven (>52% of prioritization score) by fuel combustion in the kiln, primarily from acrolein, formaldehyde, HCL, Ammonia, Mercury and Nickel. Overall, carcinogenic risk was determined to be high priority (prioritization score greater than 10). Therefore, a Health Risk Assessment was required.

Tehachapi Cement submitted an HRA to the District, utilizing the Hotspots Analysis and Reporting tool (HARP2) and AERMOD dispersion modeling software. Using meteorological, terrain, emission release point, and toxic emissions inventory information, the carcinogenic and non-carcinogenic risk (chronic and acute) was quantified for nearby residential and worksite receptors. Based on the HRA, the maximum exposed receptor (residential) for carcinogenic risk was estimated at 5.25 in one million. Similarly, the chronic non-carcinogenic hazard index was 0.14 while the acute non-cancer hazard index was 0.33 for maximum exposed residential receptor. These results do not exceed significant levels of 10 in a million for cancer risk or Hazard Index greater than 1.0 for non-cancer (chronic and acute). Therefore, the facility risk classification will remain as intermediate, and facility will continue to be subject to quadrennial updates to health risk prioritization.

Industry-Wide Sources

The three industry-wide source categories determined by ARB are: auto body shops, gasoline dispensing facilities (GDF), and dry cleaning facilities. ARB has developed individual industry-wide risk assessment procedures for those three facilities.

Auto body Shops: No new industrywide auto body shops were permitted in 2024, and there were no modifications to existing auto body shops. Based on “Auto Body Shop Industry-Wide Risk Assessment Guidelines”, all auto body facilities located in the District have been found to be “low priority” for health risk.

GDF: In 2024, the District processed five (5) application for new storage tank at new facilities and 5 applications to modify existing GDFs during 2024. Based on the maximum allowable throughputs and receptor proximity for each GDF, all new and modified facilities received low prioritization scores.

Diesel Engine Re-Prioritization:

The Criteria and Toxics Regulations (CTR) requires toxic emissions reporting for diesel engines as part of sector I initial reporting. Therefore, using the HARP2 software the District was able to re-prioritize 85 diesel engine facilities for health risk to offsite receptors. Also, in July 2024, the California Air Resources Board (CARB) and the California Air Pollution Control Officers Association (CAPCOA) adopted new Non-Vehicular Diesel Engine Risk Assessment Guidance Document. The CARB and CAPCOA working group also created the Diesel Internal Compression Engine (DICE) health risk screening tool to streamline the risk assessment process for diesel engines. Also, using this new guidelines and risk screening tool the District re-assessed health risk for high priority diesel engine facilities within the District. A detailed list of the facilities evaluated for 2024 emissions and their current status under AB 2588 can be found in Appendix A:

AB2588 Risk Category	Number of Facilities Assessed in 2024
Low/Exempt Priority	**51**
Low/Exempt Risk	**4**
Intermediate Priority	**25**
Intermediate Risk	**5**
High Priority	**9**
High Risk	**0**

RISK REDUCTION REQUIREMENTS

Senate Bill 1731, health risk reduction requirements, was signed into law in 1992 as an adjunct to the Air Toxics "Hot Spots" inventory and assessment requirements. This law requires facilities that pose a significant risk to prepare Risk Reduction and Audit Plans. Risk Reduction and Audit Plans are usually prepared on a facility-by-facility basis; however, ARB has developed ATCM for certain industry types. State law provides these ATCM to be enforced by each local district. Categories identified for ATCM include, for example, diesel piston engines, dry cleaners, medical waste incinerators, nonferrous metal melting, cooling towers using hexavalent chromium, and ethylene oxide sterilizers. Affected sources within the District are now complying with these ATCM. Internet links to ARB's ATCM regulations can be found at http://www.arb.ca.gov/toxics/atcm/atcm.htm.

To date, no sources in the District have been required to prepare Risk Reduction and Audit Plans as no facility to date has exceeded Board-adopted significance levels requiring public notification and preparation of Risk Reduction and Audit Plans. (See Pages 3-4 for discussion of risk notification guidelines.)

Exposure to diesel exhaust emissions continue to be a primary public health concern in California. District requirements to utilize tiered engines, ARB approved diesel fuel, and assisting businesses to replace older diesel engines with newer, less polluting engines through the Carl Moyer Grant Program will reduce the exposure of eastern Kern County residents to diesel exhaust.

MINIMIZING AIR TOXIC EMISSIONS FROM NEW AND MODIFIED FACILITIES

In 1974, the District's Board of Supervisors adopted Rule 210.1 (New and Modified New Source Review), last revised in May of 2000. Implementation of this rule has been instrumental in minimizing toxic emissions from new and modified facilities, because Rule 210.1 requires all new and modified facilities to utilize Best Available Control Technology (BACT). BACT is applied to criteria pollutant emissions, including oxides of nitrogen (NOx), volatile organic compounds (VOC) and PM. By early 1982, six years before passage of AB2588, the District was actively involved in assessing expected health risk associated with new and modified facilities pursuant to Rule 419 and Section 41700 of the California Health & Safety Code. Since June of 1993, the District has utilized Cal EPA "Guidelines for New and Modified Sources of Toxic Pollutants" to determine if a project is approvable in terms of health risk. This analysis meets criteria specified in the 1997 revision to Cal EPA's "Emission Inventory Criteria and Guidelines for the Air Toxics Hot Spots Program" which allow a district to conduct an alternate evaluation for new and modified sources subject to District permits (i.e., a non-AB2588 process evaluation). Where applicable, the District gives applicants of new projects the choice of complying with the Air Toxics Program either through the permitting process or through submission of an inventory plan and report.

FUTURE OF THE AIR TOXICS PROGRAM

Minimizing TAC emissions continue to be an important part of the District's mission. In August 2016, the Toxics and Risk Managers Committee (TARMAC) of CAPCOA revised Air Toxic "Hot Spots" Program Facility Prioritization Guidelines. These guidelines were revised in response to revisions to the State's underlying health risk assessment procedure guidelines. The Committee consulted with ARB and OEHHA staff in updating these guidelines.

The revised guidelines are intended to provide air pollution control and air quality management districts with suggested procedures in prioritizing facilities into high, intermediate, and low priority categories as required by the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Air Toxics "Hot Spots" Act) in accordance with Health and Safety Code §44344.4(c). This law established a statewide program for inventory of air toxics emissions from individual facilities as well as requirements for risk assessment and public notification.

According to CAPCOA progress reports, TAC emissions have decreased by 80% over the past 30 years. The District plans to continue to assist in this effort by implementing applicable guidelines and regulations set by state and federal agencies.

SUMMARY

The District's goal and the purpose of air toxics control measures is to reduce health risks to levels deemed acceptable when weighed against the benefit to the public of the activity producing the risk. When weighing risk versus benefit, overall health risk posed by a facility must be considered rather than the fact an individual process may use or emit a substance that has very high unit risk value such as dioxins or hexavalent chromium. In other words, even though a facility may emit a highly toxic substance, if the emission rate is low and dispersion is good, the public health risk can be considered low (i.e. acceptable).

Dispersion is a function of air flow (wind patterns) and distance to a receptor (person). Any facility with potential to emit toxic substances in significant quantities is required to provide highly effective methods of controlling these emissions as well as provide a method of continuously monitoring and ensuring compliance with required air pollution control measures. A facility with potential to emit toxic substances in very small quantities presents no greater health risk (and often much less) to nearby residents than what residents expose themselves to by engaging in day-to-day activities. For example, the health risk presented from living adjacent to a freeway, walking across the street, riding in a car, flying in an airplane, practicing poor eating and/or drinking habits, or by smoking exceed health risk posed by Eastern Kern industrial facilities.

No facility in Eastern Kern County currently poses an increase in cancer risk of more than 10 in 1 million, based on an assessment of 30 years of exposure to carcinogenic emissions. This value can be put into perspective by considering risk posed by some other active and passive events in our lives. For comparison, using information from the National Center for Health Statistics, it was determined: the risk of death by falls is 112 per 1 million, the risk of death by firearms discharge is 122 per 1 million, and the rate of death from motor vehicle accidents is 124 per 1 million.

Generally, development of the unit risk value for a toxic pollutant consists of identifying carcinogenic, chronic, or acute effects on the most sensitive animal species tested and then using this as the expected impact on humans. Consequently, unit risk values are very health-conservative, and, as a result, health risk assessment result in a health conservative assessment of risk.

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Appendix A

Facility Name	City/County	Cancer Prioritization Score	Cancer Risk (Chances in a million)	Risk Category
3E COMPANY/REGULATORY DEPT	TEHACHAPI	4.27	Not Required	Intermediate
3E COMPANY/REGULATORY DEPT (HOME DEPOT)	RIDGECREST	0.59	Not Required	Exempt/Low
ADVENTIST HEALTH TEHACHAPI VALLEY	TEHACHAPI	0.0003	Not Required	Exempt/Low
ALTA ONE FEDERAL CREDIT UNION	RIDGECREST	11.55	8.1	Intermediate
AT&T SERVICES	ROSAMOND	10.56	5	Intermediate
AT&T SERVICES	TEHACHAPI	0.7	Not Required	Exempt/Low
BEACON BATTERY ENERGY STORAGE	CANTIL	0.13	Not Required	Exempt/Low
BNSF RAILWAY	Edwards	0.01	Not Required	Exempt/Low
BNSF RAILWAY	Mojave	0.0004	Not Required	Exempt/Low
BNSF RAILWAY	Boron	0.00004	Not Required	Exempt/Low
CALIFORNIA CITY FIRE DEPARTMENT	CALIFORNIA CITY	0.3667	Not Required	Exempt/Low
CALIFORNIA DEPARTMENT OF TRANSPORTATION	MOJAVE	0.38	Not Required	Exempt/Low
California Water Serv./Quartz Hill	Quartz Hill	1.29	Not Required	Intermediate
CALIFORNIA WATER SERVICE LAKE ISABELLA	KERNVILLE	6.468	Not Required	Intermediate
CALIFORNIA WATER SERVICE LAKE ISABELLA	ONYX	3.3368	Not Required	Intermediate
CALIFORNIA WATER SERVICE LAKE ISABELLA	LAKE ISABELLA	0.9972	Not Required	Exempt/Low
CALIFORNIA WATER SERVICE LAKE ISABELLA	LAKE ISABELLA	0.8408	Not Required	Exempt/Low
CALIFORNIA WATER SERVICE LAKE ISABELLA	LAKE ISABELLA	0.0462	Not Required	Exempt/Low
CALTRANS DISTRICT 9-INYOKERN	INYOKERN	4.85	Not Required	Intermediate
CALTRANS DISTRICT 9-MOJAVE	MOJAVE	7.39	Not Required	Intermediate
CALTRANS DISTRICT 9-MOJAVE	MOJAVE	2.32	Not Required	Intermediate
CALTRANS DISTRICT 9-TEHACHAPI	TEHACHAPI	1.72	Not Required	Intermediate

Facility Name	City/County	Cancer Prioritization Score	Cancer Risk (Chances in a million)	Risk Category
CALTRANS DISTRICT 9-TEHACHAPI	TEHACHAPI	0.0383	Not Required	Exempt/Low
CHARTER COMMUNICATIONS	CALIFORNIA CITY	20	0.3	Exempt/Low
Charter Communications (BRIGHTHOUSE NETWORKS)	TEHACHAPI	2.13	Not Required	Intermediate
CHINA LAKE SURGERY CENTER	RIDGECREST	3.89	Not Required	Intermediate
CHS INDUSTRIAL	BORON	1.72	Not Required	Intermediate
CHS INDUSTRIAL	BORON	0	Not Required	Exempt/Low
DIAMOND JIM'S CASINO	ROSAMOND	0.0998	Not Required	Exempt/Low
DM MOJAVE VENTURES	MOJAVE	2.06	Not Required	Intermediate
FRONTIER CALIFORNIA	INYOKERN	10.61	5.7	Intermediate
FRONTIER CALIFORNIA	CALIFORNIA CITY	10.15	0.1	Exempt/Low
FRONTIER CALIFORNIA	RIDGECREST	5.42	Not Required	Intermediate
FRONTIER CALIFORNIA	CHINA LAKE	4.92	Not Required	Intermediate
FRONTIER CALIFORNIA	LAKE ISABELLA	3.2	Not Required	Intermediate
FRONTIER CALIFORNIA	BORON	2.94	Not Required	Intermediate
FRONTIER CALIFORNIA	WELDON	1.39	Not Required	Intermediate
FRONTIER CALIFORNIA	RANDSBURG	0.3581	Not Required	Exempt/Low
FRONTIER CALIFORNIA	INYOKERN	0.0005	Not Required	Exempt/Low
LEVEL 3 COMMUNICATIONS	MOJAVE	3.1416	Not Required	Intermediate
LEVEL 3 COMMUNICATIONS	TEHACHAPI	0.1677	Not Required	Exempt/Low
LEVEL 3 COMMUNICATIONS	TEHACHAPI	0.1525	Not Required	Exempt/Low
MEDIACOM COMMUNICATIONS	RIDGECREST	1.28	Not Required	Intermediate
MILLENNIUM PACIFIC GREENHOUSE	TEHACHAPI	0.118	Not Required	Exempt/Low
MOJAVE AIR AND SPACE PORT	MOJAVE	0.08	Not Required	Exempt/Low
NEW CINGULAR WIRELESS	CALIFORNIA CITY	1.72	Not Required	Intermediate
NEW CINGULAR WIRELESS	RANDSBURG	0.25	Not Required	Exempt/Low

Facility Name	City/County	Cancer Prioritization Score	Cancer Risk (Chances in a million)	Risk Category
NEW CINGULAR WIRELESS	RIDGECREST	0.001	Not Required	Exempt/Low
PACIFIC BELL	TEHACHAPI	35.32	0.7	Exempt/Low
PACIFIC BELL	BEAR VALLEY SPRINGS	17.5	7.1	Intermediate
PACIFIC BELL	EDWARDS AFB	5.37	Not Required	Intermediate
PACIFIC BELL	MOJAVE	5.34	Not Required	Intermediate
PACIFIC BELL	CALIFORNIA CITY	0.02	Not Required	Exempt/Low
PG&E	RIDGECREST	10.34	0.1	Exempt/Low
PRISON REALTY CORPORATION	CALIFORNIA CITY	0.06	Not Required	Exempt/Low
RACE TELECOMMUNICATIONS, INC	BORON	0.78	Not Required	Exempt/Low
RACE TELECOMMUNICATIONS, INC	TEHACHAPI	0.0044	Not Required	Exempt/Low
RIDGECREST REGIONAL HOSPITAL	RIDGECREST	9.36	Not Required	Intermediate
TEHACHAPI POLICE DEPARTMENT	TEHACHAPI	40.54	3.29	Intermediate
T-MOBILE	TEHACHAPI	0.12	Not Required	Exempt/Low
T-MOBILE WEST	RIDGECREST	0.22	Not Required	Exempt/Low
USACE ISABELLA DAM	LAKE ISSABELLA	0.06	Not Required	Exempt/Low
VERIZON WIRELESS	MOJAVE	1.841	Not Required	Intermediate
VERIZON WIRELESS	TEHACHAPI	1.78	Not Required	Intermediate
VERIZON WIRELESS	CALIFORNIA CITY	1.0748	Not Required	Intermediate
VERIZON WIRELESS	TEHACHAPI	0.9723	Not Required	Exempt/Low
VERIZON WIRELESS	TEHACHAPI	0.67	Not Required	Exempt/Low
VERIZON WIRELESS	RIDGECREST	0.67	Not Required	Exempt/Low
VERIZON WIRELESS	EDWARDS AFB	0.5385	Not Required	Exempt/Low
VERIZON WIRELESS	TEHACHAPI	0.2772	Not Required	Exempt/Low
VERIZON WIRELESS	MOJAVE	0.23	Not Required	Exempt/Low
VERIZON WIRELESS	INYOKERN	0.1386	Not Required	Exempt/Low

Facility Name	City/County	Cancer Prioritization Score	Cancer Risk (Chances in a million)	Risk Category
VERIZON WIRELESS	TEHACHAPI	0.0982	Not Required	Exempt/Low
VERIZON WIRELESS	JOHANNESBURG	0.0416	Not Required	Exempt/Low
VERIZON WIRELESS	TEHACHAPI	0.009	Not Required	Exempt/Low
VERIZON WIRELESS	RIDGECREST	0.008	Not Required	Exempt/Low
VERIZON WIRELESS	EDWARDS AFB	0.008	Not Required	Exempt/Low
VERIZON WIRELESS	EDWARDS AFB	0.0012	Not Required	Exempt/Low
VERIZON WIRELESS	CALIFORNIA CITY	0.0006	Not Required	Exempt/Low
VERIZON WIRELESS	MOJAVE	0	Not Required	Exempt/Low
VERIZON WIRELESS	ROSAMOND	0	Not Required	Exempt/Low
VERIZON WIRELESS	CANTIL	0	Not Required	Exempt/Low
VOYAGER WIND II, LLC	MOJAVE	0.12	Not Required	Exempt/Low
WINDSTAR ENERGY	MOJAVE	0.4	Not Required	Exempt/Low
WINDSTAR ENERGY	MOJAVE	0.0013	Not Required	Exempt/Low
ZAYO GROUP	TEHACHAPI	0.24	Not Required	Exempt/Low