

DRAFT

Environmental Impact Report for the Diamond Pet Foods Project

SCH# 2018112039

Prepared for:



City of Ripon
Planning Department
259 N. Wilma Avenue
Ripon, CA 95366

August 2020

Draft

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LIST OF ABBREVIATIONS

°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee modeling system
BAU	Business-as-Usual
BPS	Best Performance Standards
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guide	<i>Guide for Assessing and Mitigating Air Quality Impacts</i>
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide–equivalent
Diamond or project applicant	Diamond Pet Foods
diesel PM	exhaust from diesel engines
DOT	U.S. Department of Transportation
DTSC	California Department of Toxic Substances Control
EIR	environmental impact report
EPA	U.S. Environmental Protection Agency
FR	Federal Register
GAMAQI	<i>Guide for Assessing and Mitigating Air Quality Impacts</i>
GHG	greenhouse gas
gpd	gallons per day
HAP	hazardous air pollutants
HRA	health risk assessment
lb/day	pounds per day
LCFS	Low Carbon Fuel Standard
L _{eq}	average noise level
L _{max}	maximum noise level

MDAQMD	Mojave Desert Air Quality Management District
MID	Modesto Irrigation District
MMBtu	measured in million British Thermal Units
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MPO	metropolitan planning organizations
MT	metric tons
MTCO ₂ e	metric tons of carbon dioxide equivalent
MTCO ₂ e/year	metric tons of carbon dioxide equivalent per year
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
MWh	measured in megawatt hours
NAAQS	national ambient air quality standards
NO	nitric oxide
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NOP	notice of preparation
OMP	Odor Management Plan
OPR	Governor's Office of Planning and Research
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM ₁₀	respirable particulate matter with aerodynamic diameter of 10 micrometers or less
PM _{2.5}	fine particulate matter with aerodynamic diameter of 2.5 micrometers or less
PRC	Public Resources Code
project site	Diamond Pet Foods Production Facility
PSD	Prevention of Significant Deterioration
ROG	reactive organic gases
RPS	renewables portfolio standard
RTO	regenerative thermal oxidation
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SIL	significant impact level
SIP	State implementation plan
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD or District	San Joaquin Valley Air Pollution Control District
SO ₂	sulfur dioxide
SO _x	sulfur
SR	State Route
TAC	toxic air contaminants
TCR	tribal cultural resources
TIA	transportation impact analysis
tons/year	tons per year
VTM	vehicle miles traveled

VOC	volatile organic compound
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

INTRODUCTION

This summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in Section 15123(a), "an EIR [environmental impact report] shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the Guidelines, this chapter includes (1) a summary description of the Diamond Pet Foods Project, (2) a synopsis of environmental impacts and recommended mitigation measures (Table ES-1), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of the areas of controversy associated with the project.

SUMMARY DESCRIPTION OF THE PROJECT

Diamond Pet Foods (Diamond) proposes to add a fourth production line to its existing facility in the City of Ripon. The expansion would be contained entirely within the existing physical structure of the facility.

Project Location

The Diamond Pet Foods Production Facility (project site) is a pet food production facility located in an industrial area within the City of Ripon, in San Joaquin County. The address of the facility is 942 South Stockton Avenue, Ripon, CA 95366. The project site is bounded by industrial uses to the north, railroad tracks and State Route (SR) 99 to the east, the Stanislaus River to the south, and undeveloped land to the west. Regional access to the site is provided by SR 99 and the Main Street Overcrossing (which connects SR 99 and South Stockton Avenue).

After acquiring the project site in 2010, Diamond remodeled the facility, which had previously housed the Neenah Paper mill, to accommodate a maximum of four pet food production lines. Diamond started producing pet food at the Ripon facility in 2012, under permits issued by the City, the State Regional Water Quality Control Board, and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Three production lines, with a total combined capacity of 780 tons per day of pet food, were initially permitted by SJVAPCD and installed between 2010 and 2012.

Odor Abatement Background

In July 2012, shortly after Diamond's facility became operational, the first odor complaint was registered with SJVAPCD, followed by a total of 103 odor complaints for the period from November 2012 through April 2013. In late 2012, Diamond hired Yorke Engineering to assist in evaluating the source, cause, and available methods to eliminate the odors and demonstrate compliance with the permit conditions listed in the Authority to Construct permit from SJVAPCD. The City of Ripon, by and through its Code Enforcement staff, also monitored the facility in response to citizen concerns.

As a result of the odors analysis conducted by Yorke Engineering, LLC, in consultation with SJVAPCD and based on the available information at the time, Diamond determined that the best option for controlling odors was to install a cold plasma injection system, which was reported to be successful in Europe and Canada for reducing pet food production odors. The Uniqair (manufacturer) cold plasma system was permitted by SJVAPCD, installed in 2014, and became operational in July 2014. This system, however, achieved inconsistent results and odor complaints continued after the system was installed and operating.

As a result of coordination with SJVAPCD and additional research into the remaining options to reduce odors, it was determined that the technology with the highest proven odor abatement efficiency was a regenerative thermal oxidation (RTO) system. In June 2017, Diamond selected Durr Systems to design, fabricate, and supervise the

installation of the new RTO system. Installation of the RTO system was approved in spring 2018 by SJVAPCD to replace the existing cold plasma injection system. Installation of the RTO equipment, which has the capacity to treat the dispelled air from the three existing production lines, as well as the proposed fourth production line, was completed in December 2018. The RTO system became fully operational on December 14, 2018.

Project Objectives

The project applicant has provided the following objectives for the project:

- ▶ expand the current pet food production capacity to better meet industry demands;
- ▶ utilize the existing layout/operating space and infrastructure of the facility, which was originally designed in 2010 for four production lines. This avoids additional excavation and ground-disturbance;
- ▶ utilize the existing RTO system installed in 2018 for control of production emissions as designed to (1) abate emissions from up to four production lines and (2) maximize operating efficiency (lowest fuel usage rate) during operation of four production lines;
- ▶ utilize the existing transportation infrastructure for continued truck and rail deliveries to and from the facility; and
- ▶ minimize environmental impacts to surrounding areas, including residential communities and other sensitive land uses.

Characteristics of the Project

The City is considering approval of a Major Site Plan Permit to allow installation and operation of a proposed fourth production line at Diamond's Ripon facility. The fourth production line would increase the permitted total production capacity to 1,040 tons per day (an increase of 260 tons per day from the existing capacity of 780 tons per day).

To facilitate the increase in pet food production, an additional steam conditioning unit/extruder would be installed in the steam conditioner room, as well as a fourth natural gas-fired dryer, dryer-cooler, and vertical cooler. Additional blowers, kibble take-up tubes, associated cyclones, and attrition handling equipment would also be installed within the existing production building. The two existing boilers are permitted for, and currently have adequate capacity to handle the incremental steam requirements of the fourth steam conditioning unit, as well as any other steam requirements.

All of the new equipment and facilities associated with the proposed fourth production line would be located inside the existing building.

Fabrication of the equipment for the fourth production line would be performed by Extrutech at a location outside of California. Installation of the equipment at the Diamond facility would last for three to four months, beginning in 2020, depending on the fabrication lead time.

POTENTIAL APPROVALS AND PERMITS REQUIRED

As the lead agency under CEQA, the City is responsible for considering the adequacy of the EIR and determining if the overall project should be approved. SJVAPCD is a responsible agency and will need to issue an Authority to Construct permit for the project. No other permits or approvals from other agencies are anticipated to be required.

ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts of the Diamond Pet Foods Project.

SUMMARY OF ALTERNATIVES

Because the project would not result in any significant impacts after implementation of mitigation measures, the need for alternatives in this EIR is questionable. As stated in CEQA, Section 21002.1, “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project.” Even if an alternatives analysis is required, the range of alternatives is limited because there are no significant impacts to avoid or substantially reduce. Thus, only two are evaluated in this Draft EIR.

- ▶ **No Project Alternative:** Under this alternative, no new construction would occur on the project site. The project site would remain in its current condition. The No Project Alternative is required to be evaluated in EIRs.
- ▶ **Offsite Facility Expansion Alternative:** Under this alternative, Diamond would not install a fourth production line at the Ripon facility. Instead, Diamond would increase pet food production capacity at Diamond’s facility in Lathrop to meet the company’s overall demands. This would require demolition of the existing facility and construction of a new, larger facility. This alternative would be highly impractical given the cost and site constraints.

The following summary provides brief descriptions of the alternatives. For a more thorough discussion of project alternatives, see Chapter 6, “Alternatives.”

No Project Alternative

Under the No Project Alternative, the project site would remain unchanged from current conditions. The existing Diamond Pet Foods Production Facility would remain operational, with three production lines; the proposed fourth production line would not be installed. The RTO equipment, which has already been installed as part of a separate project, would remain operational and would continue to provide odor abatement for the three production lines. The No Project Alternative would not meet the primary project objective because this alternative would not expand the current pet food production capacity to better meet industry demands. However, as required by CEQA, the No Project Alternative is evaluated in this Draft EIR.

Offsite Facility Expansion Alternative

In addition to the Ripon facility, Diamond currently produces pet food at four other manufacturing facilities located in: Meta, Missouri; Gaston, South Carolina; Lathrop, California; and Dumas, Arkansas. Under this alternative, Diamond would not install a fourth production line at the Ripon facility. Instead, Diamond would expand the current pet food production capacity at Diamond’s facility in Lathrop to meet the company’s overall demands. This alternative assumes that the Lathrop facility would be substantially redesigned to include one additional production line. Because the Lathrop facility is currently at capacity and, as it is currently designed, there is no physical space within the existing facility to construct an additional line. Adding a production line to the Lathrop facility would require demolishing the existing facility and designing/constructing a new facility. The size of the existing Lathrop site is small and would present major constraints for developing a larger facility at this location. The development costs and site constraints substantially affect the feasibility of this alternative.

Environmentally Superior Alternative

CEQA calls for the identification of an environmentally superior alternative in an EIR, and further states that, “if the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives” (Section 15126.6).

Because the No Project Alternative would result in lower impacts resulting from construction and operation of the Diamond Pet Foods Project, it is the environmentally superior alternative. However, the No Project Alternative would

not meet the primary project objective because this alternative would not expand the current pet food production capacity to better meet industry demands.

The proposed project would be environmentally superior to the Offsite Facility Expansion Alternative because, under this alternative, impacts related to air quality, greenhouse gas emissions and climate change, energy, and other environmental issue areas would be greater than the proposed project. The Offsite Facility Expansion Alternative would not result in any reduction in impacts to the environment compared to the proposed project.

For these reasons, the proposed project is the environmentally superior alternative because all impacts would be less than significant after implementation of mitigation measures, and all project objectives would be met.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

In accordance with Public Resources Code (PRC) Section 21092 and California Code of Regulations (CCR) Section 15082, the City issued a notice of preparation (NOP) and Initial Study on November 14, 2018, to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). The City accepted comments on the scope of the EIR between November 14 and December 18, 2018. A noticed scoping meeting for the EIR occurred on December 11, 2018.

Based on the comments received during the NOP comment period, including those received at the scoping meeting, the major areas of controversy associated with the project include:

- ▶ concern that the RTO system will not be effective in reducing/eliminating odors,
- ▶ suggestion that the project should not be approved until the RTOs are operating as advertised, and
- ▶ concern about noise generated by the existing facility.

Areas of controversy that fall within the scope of CEQA are addressed in this Draft EIR. Issues that fall outside the scope of CEQA are not evaluated in this Draft EIR; however, the City will continue to respond to these issues through the project planning process.

All of the substantive environmental issues raised in the NOP comment letters have been addressed or otherwise considered during preparation of this Draft EIR.

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Air Quality			
Impact 3.1-1: Short-Term Emissions of Criteria Air Pollutants and Precursors Associated with Installation of Line 4 Construction activities associated with installation of the project would result in short-term emissions of reactive organic gases (ROG), oxides of nitrogen (NO _x), carbon monoxide (CO), oxides of sulfur (SO _x), respirable particulate matter with aerodynamic diameter of 10 micrometers or less (PM ₁₀), and fine particulate matter with aerodynamic diameter of 2.5 micrometers or less (PM _{2.5}) from haul trucks deliveries of industrial equipment and worker commute trips. Project-generated construction emissions of criteria air pollutants and precursors would not exceed any San Joaquin Valley Air Pollution Control District (SJVAPCD) mass emissions thresholds. Consistent with SJVAPCD Regulation VIII (Fugitive PM ₁₀ Prohibition), measures would be implemented to reduce construction-related PM ₁₀ emissions (predominantly dust and dirt). This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.1-2: Operational Emissions of Criteria Air Pollutants and Precursors Project-related operational emissions of criteria air pollutants and precursors would not exceed the annual mass emission thresholds of significance established by SJVAPCD and operation of the project would not result in concentrations of criteria air pollutants that exceed the applicable NAAQS or CAAQS or result in a cumulatively considerable contribution to existing exceedances of the national ambient air quality standards (NAAQS) or California ambient air quality standards (CAAQS). This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.1-3: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants Operation of the project would result in increased emissions of toxic air contaminants (TACs) associated with increased operation of the boilers and RTO system and increase in truck activity. However, operation of the project would not result in levels of health risk at off-site receptors that exceed SJVAPCD-established thresholds. Therefore, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 3.1-4: Exposure of Sensitive Receptors to Odors Odorous emissions associated with project construction would be minimal and temporary and construction would not require the use of off-road, heavy-duty diesel equipment. Operation of the project would involve the continued use of RTOs as an odor-reducing technology. Potential odor-producing compounds from pet food production are expected to be in the form of volatile organic compound (VOC) emissions. Based on the results of source testing at the facility, the RTOs reduce all VOC emissions from the production lines by 99.8 percent. Also, installation of the RTO system has reduced the number of odor complaints received about the facility and the existing RTO system was designed to treat the exhaust of four production lines. Further, the project includes an Odor Management Plan (OMP) that includes a variety of odor abatement best practices and includes an odor tracking and response program. The response program includes three tiers of progressively rigorous actions ranging from systems checks to reduction in production up to 25 percent (if deemed necessary by the City). This would substantially reduce the potential impacts related to odors. However, with changes in technology and in agency procedures and contacts, it is possible that the OMP could become outdated, which could diminish its effectiveness. Therefore, without periodic updates to the OMP, the impact could be potentially significant.	PS	Mitigation Measure 3.1-4: Update the Odor Management Plan Every five years, the City will meet with DPF-Ripon and SJVAPCD to review the information in the odor management plan (OMP), as well as the overall effectiveness of the OMP, and will identify any necessary updates or other changes. Changes shall only be made if they enhance the effectiveness of the OMP for odor minimization or increase the accuracy of the information.	LTS
Greenhouse Gas Emissions and Climate Change			
Impact 3.2-1: Generation of Greenhouse Gas Emissions Installation of the fourth production line would result in greenhouse gas (GHG) emissions from construction activities from worker commute trips, materials delivery, and the use of equipment that would result in a total of 61 metric tons of carbon dioxide equivalent per year (MTCO ₂ e). Operation of the fourth production line would result in increases in energy consumption and vehicle trips that would generate approximately 13,150 MTCO ₂ e/year. GHG emissions associated with the fourth production line would be additional to the GHGs emitted by the existing three production lines, resulting in the facility generating 46,741 MTCO ₂ e/year. Mobile-source emissions would be consistent with the San Joaquin Council of Governments' (SJCOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and emissions associated	LTS	No mitigation is required for this impact.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
with electricity consumption would reduce over time due to Renewables Portfolio Standard (RPS) requirements. The addition of the fourth production line would result in the facility exceeding the emissions limit of 25,000 MTCO ₂ e/year and the Diamond Pet Foods facility would become a covered entity required to reduce GHG emissions in accordance with all requirements of the Cap-and-Trade Program administered by the California Air Resources Board. For these reasons, the project would be consistent with applicable plans and policies adopted for the purposes of reducing GHG emissions and the increase in GHG emissions associated with the project would not be a cumulatively considerable contribution to climate change. This impact would be less than significant.			
Energy			
Impact 3.3-1: Result in Wasteful, Inefficient, and Unnecessary Consumption of Energy During Project Construction or Operation The project would result in the increased consumption of electricity and natural gas at the project site, as well as an increase in automotive fuels associated with worker commute trips and haul trucks. However, the project would meet energy efficiency and advanced technology standards required by CCR Title 20. For these reasons, the project would not result in wasteful, inefficient, or unnecessary consumption of energy. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS

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1 INTRODUCTION

This draft environmental impact report (EIR) evaluates the environmental impacts of the proposed Diamond Pet Foods Project. This Draft EIR has been prepared under the direction of the City of Ripon in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000-21177) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 15000-15387). The City is the lead agency for consideration of this EIR and potential project approval.

1.1 PURPOSE AND INTENDED USES OF THE DRAFT EIR

CEQA requires that public agencies consider the potentially significant adverse environmental effects of projects over which they have discretionary approval authority before taking action on those projects (PRC Section 21000 *et seq.*). CEQA also requires that each public agency avoid or mitigate, wherever feasible, the significant adverse environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts (i.e., significant effects that cannot be feasibly mitigated to less-than-significant levels), the project can still be approved, but the lead agency's decision-maker, in this case the City of Ripon City Council, must prepare findings and issue a "statement of overriding considerations" explaining in writing the specific economic, social, or other considerations that they believe, based on substantial evidence, make those significant effects acceptable (PRC Section 21002, CCR Section 15093).

According to CCR Section 15064(f)(1), preparation of an EIR is required whenever a project may result in a significant adverse environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate or avoid the significant effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

In accordance with CCR Section 15161, this document is a project EIR that examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from a specific project. In accordance with CCR Section 15161, a project EIR must examine the environmental effects of all phases of the project, including construction and operation.

Because it has the principal authority over approval or denial of the project, the City is the lead agency, as defined by CEQA, for this EIR. Other public agencies with jurisdiction over the project are listed below in Section 1.3, "Agency Roles and Responsibilities."

1.2 SCOPE OF ENVIRONMENTAL ANALYSIS

Pursuant to CEQA and the State CEQA Guidelines, a lead agency shall focus an EIR's discussion on significant environmental effects and may limit discussion on other effects to brief explanations about why they are not significant (PRC Section 21002.1, CCR Section 15128). A determination of which impacts would be potentially significant was made for this project based on a review of the information presented in the Initial Study prepared for the project (Appendix A) and comments received as part of the public scoping process (Appendix A), as well as additional research and analysis of relevant project data during preparation of this Draft EIR.

The City has determined that the project has the potential to result in significant environmental impacts on the following resources, which are addressed in detail in this Draft EIR:

- ▶ Air Quality,
- ▶ Greenhouse Gas Emissions and Climate Change, and
- ▶ Energy.

1.2.1 Effects Found Not to be Significant

CEQA allows a lead agency to limit the detail of discussion of the environmental effects that are not considered potentially significant (PRC Section 21100, CCR Sections 15126.2[a] and 15128). Effects dismissed in an Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding in the Initial Study (CCR Section 15143).

Based on a review of the information presented in the Initial Study prepared for the project (Appendix A) and comments received as part of the public scoping process (Appendix A), as well as additional research and analysis of relevant project data during preparation of this Draft EIR, the following were identified as resources that would not experience any significant environmental impacts from the project. Accordingly, these resources are not addressed further in this Draft EIR, but are identified below with a brief explanation as to why significant impacts to each resource are not anticipated, as required by CEQA.

- ▶ Aesthetics
- ▶ Agriculture and Forest Resources
- ▶ Biological Resources
- ▶ Cultural Resources
- ▶ Geology/Soils
- ▶ Hazards and Hazardous Materials
- ▶ Hydrology/Water Quality
- ▶ Land Use/Planning
- ▶ Mineral Resources
- ▶ Noise
- ▶ Population/Housing
- ▶ Public Services
- ▶ Recreation
- ▶ Traffic and Transportation
- ▶ Tribal Cultural Resources
- ▶ Utilities/Service Systems

AESTHETICS

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project site does not contain any aesthetic resources that would be considered a scenic vista. The project site includes the existing Diamond Pet Foods Processing Facility surrounded by industrial land. From State Route (SR) 99, the project site is not distinctive from other industrial development in the viewshed. Numerous buildings and other structures dot the horizon, and the Diamond Pet Foods Processing Facility blends into this landscape. The new equipment would be installed inside the facility and would not be visible to the public. Therefore, the project would not adversely affect a scenic vista, nor would it change the visual character or quality of the site.

There are no designated scenic routes in the *City of Ripon General Plan* (2006a), and the closest scenic routes identified in the *San Joaquin County General Plan* (1992) are located sufficiently distant from the project site (Austin Road is located approximately three miles west of the project site, and River Road is located approximately two miles northeast of the project site). The project would not be located near a designated or eligible state scenic highway (California Department of Transportation 2011). Furthermore, the project would not damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings.

The project would not include the addition of new lighting fixtures, beyond the existing security lighting of the facility, which are directed downward, and screened to avoid nighttime lighting spillover effects on adjacent land uses and nighttime sky conditions. Therefore, the project would not create a new source of substantial light or glare or adversely affect day or nighttime views in the area.

For the reasons above, the project would not result in significant impacts related to aesthetics, and this issue is not discussed further.

AGRICULTURE AND FOREST RESOURCES

The project would be located in and near an operational industrial land use. The project site is not on or adjacent to farmland or land associated with a Williamson Act contract; therefore, the project would not convert farmland to non-agricultural use, nor would it conflict with zoning for agricultural use or a Williamson Act contract.

The project site does not include forest land or timberlands and is not zoned for such uses. Therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest use, nor would it conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

For the reasons above, the project would not result in significant impacts related to agriculture and forest resources, and this issue is not discussed further.

BIOLOGICAL RESOURCES

The project site is located in an industrial area, adjacent to vacant industrially zoned land, and north of the Stanislaus River. The nearest riparian habitat consists of trees along the riverbank. The undisturbed areas along the edges of fields and orchards are home to game birds, small animals, and rodents (City of Ripon 2006a). The riverbanks of the Stanislaus River are home to several sensitive species including: elderberry longhorn beetle, riparian woodrat, riparian brush rabbit, western yellow billed cuckoo, and delta button celery.

Because the project would be located inside an existing facility, the project would not have a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species. Also, the project would not adversely affect wetlands as there would be no direct removal, filling, hydrological interruption, or other means of disturbing wetlands and no wetlands are located on the project site.

The closest riparian habitats are along the banks of the Stanislaus River, approximately 0.2 mile south of the project site. This would be sufficiently distant such that the project would not affect the riparian habitats or other sensitive natural communities along the river, nor would it interfere with the movement of native resident or migratory fish or wildlife species.

The project would not require the removal of biological resources, including trees. Therefore, it would not conflict with local policies protecting biological resources.

The project site is located within the boundaries of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (San Joaquin Council of Governments 2000), on land designated as Category A/No Pay Zone. This category of land is considered urban land already converted from open space. The project would not conflict with provisions of the SJMSCP, nor would it change the current designation of the project site.

For the reasons above, the project would not result in significant impacts related to biological resources, and this issue is not discussed further.

CULTURAL RESOURCES

There are no structures or sites in the City of Ripon listed on the National Register of Historical Places. New Hope, which is located at the Ripon Community Center, is included on the California Historic Landmark list. The project would be located 0.5 mile from the Ripon Community Center and, therefore, would not cause a substantial adverse change in the significance of a historical resource.

The City of Ripon has not publicized the location of any archaeological resources, unique paleontological resources, or geologic features in the area (City of Ripon 2006a). The project would be located on a developed site where no archaeological resources have previously been recorded. No excavation or ground disturbance would be required because equipment would be assembled offsite and then installed within the existing facility. Therefore, the project would not destroy archaeological resources, unique paleontological resources or sites, or unique geologic features. Further, the project would not disturb human remains.

For the reasons above, the project would not result in significant impacts related to cultural resources, and this issue is not discussed further.

GEOLOGY/SOILS

The project site is not located in an Alquist-Priolo Earthquake Fault Zone and the nearest faults (the Tracy-Stockton Fault and a small buried fault that extends south from Banta to Stanislaus County) are located at least 15 miles away (City of Ripon 2006a:4-4). Because surface ground rupture along faults is generally limited to a linear zone a few feet wide, ground rupture because of a fault across the project site is unlikely.

If a seismic event occurs at a nearby fault, seismic-induced settlement could affect the project site. The extent of damage would depend on soil characteristics, groundwater depth, and duration and intensity of the earthquake. Potential ground shaking at the project site could expose people or structures to potentially substantial adverse impacts. As required by law, the existing Diamond Pet Foods Processing Facility conforms to the standards contained within California Building Code (CBC) Title 24, which identifies specific design requirements to reduce damage from strong seismic ground shaking and seismic-related ground failure (including liquefaction). The project involves installing equipment within and near the existing building, but no new buildings would be constructed. Therefore, potential hazards associated with strong seismic ground shaking and seismic-related ground failure (including liquefaction) would be minimized.

The topography of the project area is relatively flat. Therefore, the project site would not be subject to landslides. Further, the project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project.

Most of the soils in the City of Ripon planning area are of the sandy loam type, providing good percolation and little erosion and sedimentation (City of Ripon 2006a:2-73). Because this project involves no ground disturbance, there would be no impact related to erosion or loss of topsoil. Further, no significant impacts related to expansive soil hazards would occur because, as described above, the existing Diamond Pet Foods Processing Facility has been designed and constructed in conformance with the applicable CBC, which has specific site development and construction standards by soil type to prevent expansive soil hazards, and because the project does not include the construction of new buildings.

Implementation of the project would not involve the use of septic tanks or alternative wastewater disposal systems.

For the reasons above, the project would not result in significant impacts related to geology and soils, and this issue is not discussed further.

HAZARDS AND HAZARDOUS MATERIALS

Construction activities would involve the use of hazardous materials, such as fuels, lubricants, paints, solvents, gasoline, asphalt, and oil. The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment as a result of improper handling or use, accident, environmentally unsound disposal methods, or fire, explosion, or other emergencies, resulting in adverse health effects. All allowable uses would be subject to compliance with federal, state, and local hazardous materials regulations, and would be monitored by the State (e.g., the California Division of Occupational Health and Safety and the California Department of Toxic Substances Control [DTSC]), the County, and Diamond. Therefore, it is anticipated that the routine use of these materials handled in accordance with these laws and regulations would not create any impacts to the public or the environment. The Diamond Pet Food Processing Facility currently uses and stores various hazardous materials onsite, and maintains and implements a robust emergency response and evacuation plan. With project operation, the proposed fourth production line would not change the types of hazardous materials stored and handled onsite, but would require an increase of approximately 20 percent in the amount of these materials that would be used. Because all hazardous materials would continue to be used and stored in compliance with federal, state, and local hazardous materials regulations, hazardous materials impacts would be minimized.

There are no existing or proposed schools located within 0.25 mile of the project. The closest school to the project site is Ripon Elementary School, which is located approximately 1.1 miles northwest of the project site. Therefore, the project would not emit hazardous emissions or handle hazardous materials within 0.25 mile of an existing or proposed school.

The Diamond Pet Foods Processing Facility is not listed in DTSC's EnviroStor Database as having previous hazardous materials spills. In the surrounding area, two locations are listed in EnviroStor: Evergreen Environmental Services and Nestle Company. Evergreen Environmental Services, located approximately one mile from the project site, was a hazardous waste facility that was closed in 2002 (DTSC 2017). Nestle Company, located approximately one mile from the project site, had a hazardous materials evaluation completed in 1995; site screening was completed and the site was referred to the Central Valley Regional Water Quality Control Board (RWQCB) for oversight of soil and groundwater contamination (DTSC 2017). Thus, known hazardous materials sites would not be affected during implementation of the project.

The project would not be located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. The closest airport is the Modesto City-County Airport located 10 miles from the project site. Therefore, the project would not result in a safety hazard for people residing or working in the project area.

The City of Ripon does not have an adopted emergency response plan or emergency evacuation plan; however, Diamond Pet Food Processing Facility maintains and implements a robust emergency response and evacuation plan for the facility. Therefore, the project would not impair implementation of or physically interfere with such plans.

No wildlands are located on or adjacent to the project site. Therefore, the project would not expose people or structures to wildland fire risks.

For the reasons above, the project would not result in significant impacts related to hazards and hazardous materials, and this issue is not discussed further.

HYDROLOGY/WATER QUALITY

Wastewater Discharge

The existing Diamond Pet Foods Processing Facility is subject to Waste Discharge Requirements (WDRs) from the Regional Water Quality Control Board that prohibit discharging waste to surface waters, discharging hazardous materials, application of residual solids to land areas, discharging domestic wastewater to the industrial system, discharging water classified as 'designated', treatment system bypass, discharging in a different location, and the discharge of toxic substances. Project construction activities involves installation of equipment that would be assembled offsite and would not involve ground disturbance. Therefore, no stormwater-quality-related permits or control measures would be required for construction. Installation of proposed equipment would not violate water quality standards. Project operation is similarly not expected to violate any water quality standards or waste discharge requirements. The existing WDRs would remain in effect during project operation.

Groundwater Recharge

The City of Ripon operates its own potable water system using groundwater from two primary aquifers. The City is located in California's Central Valley at the northern end of the San Joaquin Valley (City of Ripon 2006a). Groundwater supplies 40 percent of the water used in the San Joaquin Valley during years with normal precipitation, and higher percentages during drought years. There are two primary groundwater aquifers underlying the City of Ripon planning area. The two aquifers have a combined annual recharge of 196,000 to 263,000 acre-feet annually. Using a conservative estimate of 15 percent of the specific yield, the estimated available groundwater per 1,000 surface acres is approximately 6,000 acre-feet. Over the approximately 10 square miles of planning area, this would amount to nearly 40,000 acre-feet, not including surface water infiltration along the Stanislaus River.

The 2001 Water Management Plan for San Joaquin County found that "overdraft is not typically a problem in the southern portion of the [groundwater] basin, where Ripon is located, [because] irrigation districts in that area have

sufficient surface water supplies and conveyance facilities and have historically not relied heavily on groundwater for irrigation” (City of Ripon 2006a:2-69). The City has adopted a Groundwater Preservation Plan to proactively address stabilizing and enhancing the groundwater levels in the Ripon area as future growth occurs. This plan provides the planning framework for groundwater recharge basins in the general area around the City.

The existing onsite groundwater well provides water to the Diamond Pet Foods Processing Facility. Existing groundwater use at the facility is 10,500 gallons per day (gpd). The groundwater is currently treated onsite by reverse osmosis. The project would require an increase of 3,500 gpd in groundwater withdrawal to supply the boiler and the reverse osmosis conditioning cylinders, which is an increase of approximately 33 percent based on existing usage. However, no interference with groundwater recharge would occur because no additional impervious areas would be added.

Site Drainage and Stormwater Runoff

The City uses four different systems for handling stormwater runoff. Stormwater drainage in the older industrial part of the City west of SR 99 flows into the industrial sewage lines. Another portion is pumped into South San Joaquin Irrigation District lines or canals. The largest portion of the drainage flows by gravity through seven outfalls directly into the Stanislaus River. Stormwater from the commercial area north of SR 99 near Jack Tone Road is collected in a stormwater detention pond. The water can be pumped south into a City gravity storm drainage line in Jack Tone Road that drains into the Stanislaus River. (City of Ripon 2006a:2-73.)

The project would not change the existing drainage patterns of the site or area and would not result in substantial on- or off-site erosion or siltation. The project would not alter any streams or rivers, or substantially increase the rate or amount of surface runoff.

The project would not add impervious surface areas to the project site, and the amount of stormwater runoff is expected to be similar to existing conditions. The four stormwater drainage systems laid out in the *City of Ripon General Plan* (2006a) flow by gravity through seven discharge points into the Stanislaus River. This helps to prevent any overflow. The project would not increase stormwater runoff and would not contribute to an exceedance of the City’s stormwater system capacity.

As described above, because installation of the equipment involves no ground disturbance, no stormwater-quality-related permits or control measures would be required for construction. Installation of the proposed equipment would not violate water quality standards or otherwise result in substantial additional sources of polluted runoff. As noted above, the Diamond Pet Foods Processing Facility is already subject to Wastewater Discharge Requirements that would remain in effect during project operation.

Flooding

The project would not include the construction of housing. Further, the existing facility is not located within the 100-year floodplain. Therefore, the installation of the new equipment would not impede or redirect flood flows. The project would be constructed within an existing facility and would not be located close to a levee or dam. Therefore, the project would not create any additional risk of flooding. Inundation of the project by seiche, tsunami, or mudflow has a low potential of occurring due to the project location in an inland (approximately 75 miles from the coast) area and the limited number and size of open water bodies nearby. Ripon is located in the Central Valley and is relatively flat, thus reducing the risk of inundation by mudflow.

For the reasons above, the project would not result in significant impacts related to hydrology and water quality, and this issue is not discussed further.

LAND USE/PLANNING

The project site is surrounded by industrial land uses to the north, SR 99 to the east, the Stanislaus River to the south, and undeveloped land to the west. Oak Grove Park is located to the southwest and residential areas are located further to the north, on either side of SR 99. No existing communities would be physically divided by the project.

The project site is designated Heavy Industrial by the *City of Ripon General Plan* (2006a) and is zoned Heavy Industrial and Resource Conservation (City of Ripon 2006b). The northern portion of the project site containing the buildings, parking areas, and driveways is zoned Heavy Industrial, while the southern portion of the project site containing the evaporation ponds and other undeveloped areas is zoned Resource Conservation. The project would be consistent with the existing land use designations and zoning and all applicable policies, including those related to environmental protection.

As described above under, "Biological Resources," the project site lies within the boundaries of the SJMSCP, on land designated as Category A/No Pay Zone. This category of land is considered urban land already converted from open space. The project would not conflict with provisions of the SJMSCP, nor would it change the current designation of the project site.

For the reasons above, the project would not result in significant impacts related to land use and planning, and this issue is not discussed further.

MINERAL RESOURCES

The *San Joaquin County General Plan* (1992) indicates that the project area does not contain any state or locally designated mineral resources. Due to the lack of known mineral deposits within the project site, project implementation would not result in a loss of availability of locally important mineral resources or a known mineral resource that would be of value to the region and the residents of the state. Thus, no significant impacts to mineral resources would occur, and this issue is not discussed further.

NOISE

Noise levels are typically discussed as A-weighted decibel (dBA), a sound level scale that includes the frequencies of sound to which the human ear is most sensitive. Decibels are a unit of measurement indicating the relative amplitude or intensity of a sound. Noise can be described in a number of ways. Typically, community noise levels are described as 24-hour noise levels that add penalties for the noise-sensitive times of the day. These include the community equivalent noise level and the day-night noise level. Other noise descriptors are used to describe short-term noise events such as the average noise level (L_{eq}) over a given period of time or the instantaneous maximum noise level (L_{max}).

Short-Term Construction Noise

Construction noise typically occurs intermittently and changes during construction phases (e.g., demolition/land clearing, grading and excavation, building construction). Typical noise levels for individual pieces of construction equipment range from approximately 80 to 85 dBA at 50 feet (U.S. Department of Transportation, Federal Highway Administration 2006). Project construction would generate noise and temporarily increase noise levels on the project site. Construction activities would involve the use of typical construction equipment, such as a crane, forklifts, welding machines, generators, and hand tools. Potential increased noise from construction would be temporary and would cease once the project is complete (approximately three to four months). Construction would occur inside the existing building, which would substantially reduce the potential for substantial increase in exterior noise levels. As proposed, all exterior construction activities (primarily equipment movement and staging) would take place between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday and (if needed) between 10:00 a.m. and 6:00 p.m. on Sunday.

Depending on the activities performed and equipment usage requirements, combined average-hourly noise levels at construction sites typically range from approximately 65 to 89 dBA L_{eq} at 50 feet (U.S. Environmental Protection Agency 1971). Assuming a maximum construction noise level of 89 dBA L_{eq} and an average attenuation rate of 6 dBA per doubling of distance from the source, noise levels at the nearest sensitive receptors—residential areas located approximately 0.3 mile to the north on both sides of SR 99—would not exceed 60 dBA L_{eq} , which is the City's maximum exterior noise level for residential land uses during the day (7 a.m. to 10 p.m.). Therefore, short-term construction noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards.

Long-Term Operational Noise

Existing sources of noise associated with current operation of the Diamond Pet Foods Processing Facility includes pumps, compressors, fans, air dryers, standby generators, loading docks, and vehicle traffic, which is typical of a food processing plant. Operation of the proposed fourth production line would require eight additional employees and, therefore, would generate additional employee vehicle trips. With the addition of the fourth production line, the number of both truck and rail deliveries would increase, resulting in increased noise from truck and rail traffic. However, when considering increases in noise, it takes a doubling of the noise source to result in a perceptible (i.e., 3 dB) increase in noise. Eight additional employees would not result in a doubling in traffic on any associated roadways and, therefore, would not result in an audible increase in traffic noise.

Noise measurements, including both a long-term (i.e., 24-hour) and a short-term (i.e., 15-minute) measurement, were conducted on July 1, 2019. For the long-term (i.e., 24-hour) noise measurement, the noise meter was located approximately 50 feet from the centerline of Stockton Avenue on the east side of the roadway. This measurement recorded maximum noise levels for each hour of the day ranging from 79.6 to 92.8 dB L_{max} . For the short-term (i.e., 15-minute) measurement, the noise meter was located approximately 25 feet from the centerline of Stockton Avenue and a maximum noise level of 90.1 dB L_{max} was measured during the 15-minute period. This maximum noise level was generated by a truck passing along the road. At a distance of 50 feet, this noise level would attenuate to approximately 87.1 dB L_{max} .

The long-term and short-term noise measurements suggest that, under existing conditions, heavy trucks travel along the segment of Stockton Avenue south of Main Street to access the Diamond Pet Food facility and other nearby industrial land uses during all hours of the day. Thus, the addition of a limited number of new project-generated truck passbys during daytime or nighttime hours would not result in a substantial change to the existing noise environment.

Regarding new stationary noise sources, the proposed additional production line would operate in a similar fashion to the existing three production lines and would be expected to generate the same types and levels of noise as the existing equipment. Similar to the discussion above for traffic noise, a doubling of the noise source would be required to result in an audible increase in noise. The addition of one production line, and associated noise sources, to the existing three production lines would not result in a doubling of the noise sources or an audible increase in noise. Further, the production line and associated equipment would be completely enclosed within the facility walls, similar to current operations. The additional production line would not result in an audible increase in traffic or stationary noise over existing conditions. Therefore, the project's long-term operations would not result in the exposure of people to additional long-term operational noise levels, and additional noise would not exceed the applicable City noise standards.

Vibration

Project construction may result in varying degrees of temporary groundborne vibration and noise, depending on the specific construction equipment used and activities involved. It is expected that the highest levels of groundborne vibration and noise levels associated with the project would be generated by trucks and railcars used to deliver materials to and from the project site, both during construction and long-term project operation. As described above, the existing Diamond Pet Foods Processing Facility is located in an industrial area with noise and vibration levels typical of industrial land uses. While the project would increase the number of trucks and railcars entering and exiting the project site, the facility is an existing noise and vibration source. Further, the project site is located sufficiently distant from the nearest sensitive receptors (0.3 mile away, with SR 99 separating the residential and industrial land uses), such that any increased noise and vibration levels from project construction and operation would not be discernable from existing noise and vibration levels. Thus, the project would not result in the exposure of sensitive receptors to excessive groundborne noise or vibration levels.

Airport Noise

The project would not be located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. The closest airport is the Modesto City-County Airport located 10 miles from the project site. Therefore, the project would not expose people residing or working in the project area to excessive noise levels associated with airports or private airstrips.

For the reasons above, the project would not result in significant impacts related to noise, and this issue is not discussed further.

POPULATION/HOUSING

The project would require up to eight new employees to operate the expanded Diamond Pet Foods Processing Facility. Project construction would occur over a three- to four-month period for installation of the Line Four processing equipment and would require 15 construction workers per day. It is assumed that new employees and temporary construction workers would be local residents and would not induce growth in the project area, either directly or indirectly. No existing homes would be removed or displaced by the project's construction or operational activities, and the project would not include construction of new housing. Thus, no significant impacts to population and housing would occur, and this issue is not discussed further. The potential for growth-inducing effects is considered, as required by CEQA, in Chapter 5, "Other CEQA Sections."

PUBLIC SERVICES

Construction and operation of a fourth production line inside an existing pet foods processing facility would not significantly affect public services. The project would not increase demand for fire or police protection services such that the construction of new or expansion of existing fire or police service facilities would be required. The project does not include a residential component that would necessitate additional police or fire coverage. As noted above, the project would not provide any new housing that would generate new students in the community that would require school facilities or a need for new or expanded park facilities. Thus, no significant impacts to public services would occur, and this issue is not discussed further.

RECREATION

Construction and operation of a fourth production line inside an existing pet foods processing facility would not increase the use of existing recreational facilities—the closest being Oak Grove Park, approximately 0.5 mile southwest of the project site—such that substantial physical deterioration of these facilities would occur or be accelerated. The project would not involve any changes to permitted uses of existing recreational facilities, nor would it require the construction of new recreational facilities or the expansion of existing ones that might have an adverse physical effect on the environment. Thus, no significant impacts to recreation would occur, and this issue is not discussed further.

TRAFFIC AND TRANSPORTATION

Traffic Operations and Vehicles Miles Traveled

Policy B1 of the City of Ripon 2040 General Plan notes that projects likely to generate significant levels of daily or peak hour traffic on local streets will be required to have a traffic study prepared by a qualified traffic engineer at the applicant's expense. However, the City of Ripon does not have adopted transportation impact analysis (TIA) guidelines or define the number of trips (peak hour or daily) which would constitute a significant level of traffic such that a traffic study would be required. Research was conducted on TIA guidelines of neighboring cities, and it was determined that the City of Manteca Transportation Impact Analysis Guidelines were most applicable to this project due to the specificity of the guidelines and the size of the city, as well as Manteca's proximity, and thus, were used to determine conditions that would necessitate the completion of a TIA. The Manteca Draft Transportation Impact Analysis Guidelines state that, in general, only projects that are expected to generate more than 100 a.m. or p.m. weekday peak hour vehicle trips would require a TIA. Additionally, the Manteca Draft Transportation Impact Analysis Guidelines state that an intersection may be considered for inclusion in the TIA if the project would add 25 or more peak hour vehicle trips per lane to any intersection movement. The project would not generate more than nine trips in the peak hour; and thus, no TIA would be necessary using these standards.

In addition, Senate Bill (SB) 743, passed in 2013, required the Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation (and Section 21099[b][2] of CEQA, which was promulgated by the legislation), upon adoption of the new guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." The underlying purpose of this change in CEQA is to lower vehicle miles traveled (VMT) statewide, to encourage mixed use development, and to encourage infill development.

Updated CEQA Guidelines were adopted on December 28, 2018; therefore, as of that date, LOS or other measures of congestion are no longer considered significant impacts under CEQA. According to the new CEQA Guidelines (Section 15064.3), VMT has replaced congestion as the metric for determining transportation impacts. LOS can no longer be used to determine significant traffic impacts.

The guidance provided thus far relative to VMT significance criteria is focused on residential, office, and retail uses. However, as noted in the updated guidelines, lead agencies have discretion to choose the most appropriate methodology to evaluate a project's potential impacts in terms of VMT.

The Technical Advisory on Evaluating Traffic Impacts in CEQA issued by OPR in November 2017—which provides OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures—states that a project that generates or attracts fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR 2017:10). The City reviewed the trip generation associated with the project and found that the project would generate approximately 59 truck trips per day and 20 employee-related vehicle trips per day—a total of 79 trips per day. Because this project would generate fewer than 110 trips per day, it is assumed, consistent with OPR's Technical Advisory, to result in a less-than-significant transportation impact. This issue is not discussed further.

Alternative Transportation Modes

The industrial nature of existing land use within the project area, which is characterized by long block lengths and high heavy truck volumes, and the fact that SR 99 and the Union Pacific/Southern Pacific Railroad bisects the city and acts as a barrier to bicycle and pedestrian mobility, suggests that the project would generate minimal, if any, bicycle or pedestrian demand. Additionally, there are no existing bicycle or transit facilities in the study area. Thus, the project would not adversely affect any existing bicycle, pedestrian, or public transit facilities. The City of Ripon General Plan includes a Bicycle Route Master Plan which includes proposed improvements to the bicycle network and details the plan for the expansion of transit services within the city. The project would be located within the property boundaries of the existing Diamond Pet Foods production facility and would not alter the physical transportation network external to the project site. Therefore, the project would not conflict with any planned bicycle, pedestrian, or transit facilities in the vicinity of the project site. Therefore, the project would not conflict with a program, plan, ordinance, or policy addressing bicycle, pedestrian, or transit facilities. This issue is not discussed further.

Design Features

The project would not require the construction, re-design, or alteration of any public roadways. The types of vehicles generated by the project and traveling to and from the project site (i.e., haul trucks and passenger vehicles) would be consistent with the existing types of vehicles accessing the project site and operating along the study area roadway network. Additionally, existing roadways within the project area were designed to safely serve the facility. Thus, the project would not result in hazards because of design features or incompatible vehicular uses. This issue is not discussed further.

Emergency Access

As noted above, the project would not require the construction, re-design, or alteration any public roadways, and thus existing emergency access to the project site would be maintained. Project construction activities would occur entirely within the existing property boundaries of the existing Diamond Pet Foods production facility and would not change or impair emergency vehicle access to the facility. Therefore, adequate emergency access would be maintained. This issue is not discussed further.

TRIBAL CULTURAL RESOURCES

Assembly Bill 52, as provided in PRC Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete, before the issuance of an NOP, of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. The City is not currently aware of any tribal cultural resources (TCRs) that exist in the vicinity of the project.

On November 27, 2018, the City sent letters to the Buena Vista Rancheria and the Torres Martinez Desert Cahuilla Indians notifying the Tribes of the proposed project and inviting the Tribes to consult with the City regarding the project. The letters were received by the Tribes on December 3, 2018. The City did not receive a response from either Tribe. PRC Section 21080.3.1(b) states that if a written request is not received by the lead agency within 30 calendar days, the consultation process will not take place.

The project does not include ground-disturbing activities, and equipment would be located inside an existing structure. Thus, the project would not result in significant impacts related to TCRs, and this issue is not discussed further.

UTILITIES/SERVICE SYSTEMS

Wastewater Treatment

Wastewater at the facility is produced from the wash-down of the reverse osmosis cylinders and from the peaker power plant east of the facility. The wastewater is treated onsite by Diamond's clarifier and evaporation ponds, all of which are permitted by the Central Valley RWQCB. The Central Valley RWQCB (2012) dictated Waste Discharge Requirements for the Diamond Pet Foods Processing Facility when the facility opened in 2012. The Central Valley RWQCB identified what Diamond would be using their water for, including how many gallons would be used compared to the paper mill that previously operated on the project site. The existing facility generates an average of 9,000 gpd of wastewater while the maximum capacity of the system is 12,000 gpd. The project would result in an incremental increase in wastewater generation amounting to approximately 1,600 gpd (for a total of 10,600 gpd), which is approximately 1,400 gpd below the maximum capacity of the system. There would be no increase in wastewater from the peaker plant, as this facility has no operating affiliation with Diamond. Similar to existing operating conditions, the project's wastewater would be treated onsite by Diamond's clarifier and evaporation ponds. The project would not exceed wastewater treatment requirements of the Central Valley RWQCB, nor would it exceed the capacity of the onsite wastewater treatment system.

Water Supply

Existing water demands at the Diamond Pet Foods Processing Facility are met by Diamond's onsite groundwater well. Existing groundwater use at the facility is 10,500 gpd. The groundwater is currently treated onsite by reverse osmosis. The project would require 3,500 gpd in groundwater withdrawal to supply the boiler and the reverse osmosis conditioning cylinders, which is an increase of approximately 33 percent based on existing usage; however, no new or expanded entitlements would be needed.

Stormwater Drainage

The project site contains stormwater drainage and erosion features that drain runoff from incidental rainfall. Surface runoff from the Diamond facility currently drains into two existing, onsite retention basins. The project site is relatively flat and a large portion of the 157-acre property is composed of impervious surfaces. The project includes installation of a fourth production line inside the existing facility. No increase in stormwater rate or volume would result.

Solid Waste

Construction activities would generate small amounts of waste that may require off-site disposal. Non-hazardous waste generated during construction would include common household trash, cardboard, wood pallets, copper wire, scrap metal and wood wire spools, and packaging materials for equipment and parts. All solid waste generated during construction would be collected and disposed of or recycled by the contractor at Foothill Sanitary Landfill (in

Linden, CA), and any hazardous waste would be disposed of off-site in accordance with all applicable laws pertaining to the handling and disposal of hazardous waste.

Operation of the project would generate solid waste through the processing of pet food products, and would incrementally increase the facility's current generation of solid waste (with the addition of the fourth production line). Waste generated during project operation would be collected and disposed of or recycled in accordance with state and federal laws.

It is not anticipated that the amount of solid waste generated by the project would exceed the capacity of Foothill Sanitary Landfill, which is projected to be in operation until 2082 based on the current permit; average daily volume at the landfill is 566 tons (San Joaquin County 2017).

For the reasons above, the project would not result in significant impacts related to utilities and service systems, and this issue is not discussed further.

1.3 AGENCY ROLES AND RESPONSIBILITIES

1.3.1 Lead Agency

The City is the lead agency responsible for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public review process is complete, the City Council will determine whether to certify the EIR (see State CEQA Guidelines Sections 15090) and approve the project.

1.3.2 Trustee and Responsible Agencies

A trustee agency is a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. There are no trustee agencies for this project.

Responsible agencies are public agencies, other than the lead agency, that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. The only responsible agency that may have responsibility for, or jurisdiction over, implementation of elements of the project is SJVAPCD.

1.3.3 Other Required Permits and Approvals

SJVAPCD will need to issue an Authority to Construct permit for the project. No other permits or approvals from other agencies are anticipated to be required.

1.4 CEQA PUBLIC REVIEW PROCESS

1.4.1 Notice of Preparation and Initial Study

In accordance with PRC Section 21092 and CCR Section 15082, the City issued an NOP and Initial Study on November 14, 2018 to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). The NOP and Initial Study were submitted to the State Clearinghouse, which then distributed the NOP to potential responsible and trustee agencies; posted on the City's website (http://www.cityofripon.org/connect/city_communication/public_notices); posted with the San Joaquin County Clerk; and made available at the City's Planning Department and the Ripon Branch Library. In addition, the NOP was distributed directly to public agencies (including potential responsible and trustee agencies) and two interested Native American Tribes. The NOP was circulated for a 35-day review period, with comments accepted through December 18, 2018.

In accordance with CCR Section 15082(c), a noticed scoping meeting for the EIR occurred on December 11, 2018 at 6 p.m. as part of the City Council Meeting at City Hall in Ripon, CA.

The purpose of an NOP is to provide sufficient information about the project and its potential environmental impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (CCR Section 15082[b]). Comments submitted in response to the NOP are used by the lead agency to identify broad topics to be addressed in the EIR. Comments on environmental issues received during the NOP public comment period are considered and addressed in this Draft EIR. Appendix A contains the NOP, Initial Study, and comment letters submitted during the NOP public comment period.

1.4.2 Public Review of this Draft EIR

This Draft EIR is being circulated for public review and comment for a period of 45 days, from August 28, 2020 to October 12, 2020.

During the public comment period, written comments from the public as well as organizations and agencies on the Draft EIR's accuracy and completeness may be submitted to the City. Written comments (including via email) must be received by 5:00 p.m. on October 12, 2020. Written comments should be addressed to:

City of Ripon Planning Department
259 N. Wilma Avenue, Ripon, CA 95366
Attention: Ken Zuidervaart, Planning Director
Telephone: (209) 599-2108; Fax: (209) 599-2685; Email: kzuidervaart@cityofripon.org

Agencies that will need to use the EIR when considering permits or other approvals for the project should provide the name, phone number, and email address of a contact person. Comments provided by email should include "Diamond Pet Foods Project Draft EIR Comment" in the subject line, and the name and physical address of the commenter in the body of the email.

The Draft EIR is available for review during normal business hours at the City of Ripon Planning Department (259 N. Wilma Avenue, Ripon). The Draft EIR is also available online at:
http://www.cityofripon.org/connect/city_communication/public_notices.

1.4.3 Final EIR

Following public review of the Draft EIR, a Final EIR will be prepared that will include both written and oral comments on the Draft EIR received during the public review period, responses to those comments, and any revisions to the Draft EIR. The Draft EIR and Final EIR will comprise the EIR for the Diamond Pet Foods Project.

Before taking action on the Diamond Pet Foods Project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.5 ORGANIZATION OF THE DRAFT EIR

This Draft EIR is organized as follows:

The "Executive Summary" introduces the Diamond Pet Foods Project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to less-than-significant levels.

Chapter 1, "Introduction," describes the purpose of the EIR, the scope of the environmental analysis, agency roles and responsibilities, the CEQA public review process, organization of this Draft EIR, and standard terminology.

Chapter 2, "Project Description," describes the location, background, and objectives for the Diamond Pet Foods Project, and describes the project elements in detail.

Chapter 3, "Environmental Impacts and Mitigation Measures," evaluates the expected environmental impacts generated by the Diamond Pet Foods Project, arranged by subject area (e.g., Air Quality, Greenhouse Gas Emissions and Climate Change, and Energy). Within each subsection of Chapter 3, the regulatory setting, environmental setting, methodology, and thresholds of significance are described. The anticipated changes to the existing conditions after development of the project are then evaluated for each subject area. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented along with the remaining level of significance. Environmental impacts are numbered sequentially within each section (e.g., Impact 3.1-1, Impact 3.1-2, etc.). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 3.1-2 would be Mitigation Measure 3.1-2.

Chapter 4, "Cumulative Impacts," provides information regarding the potential cumulative impacts that would result from implementation of the Diamond Pet Foods Project together with other past, present, and probable future projects.

Chapter 5, "Other CEQA Sections," provides a discussion of significant and unavoidable impacts, significant and irreversible environmental changes, and growth-inducing impacts.

Chapter 6, "Alternatives," evaluates alternatives to the Diamond Pet Foods Project, including alternatives considered but eliminated from further consideration, the No Project Alternative, and the Offsite Facility Expansion Alternative. The environmentally superior alternative is identified.

Chapter 7, "Report Preparers," identifies the individuals who contributed to preparation of this Draft EIR.

Chapter 8, "References," identifies the references used in preparation of this Draft EIR.

1.6 STANDARD TERMINOLOGY

This Draft EIR uses the following standard terminology:

- ▶ "No impact" means no change from existing conditions (no mitigation is needed).
- ▶ "Less-than-significant impact" means no substantial adverse change in the physical environment (no mitigation is needed).
- ▶ "Potentially significant impact" means an impact that might cause a substantial adverse change in the environment (mitigation is recommended because potentially significant impacts are treated as significant).
- ▶ "Significant impact" means an impact that would cause a substantial adverse change in the physical environment (mitigation is recommended).
- ▶ "Significant and unavoidable impact" means an impact that would cause a substantial adverse change in the physical environment and that cannot be avoided, even with the implementation of all feasible mitigation.

2 PROJECT DESCRIPTION

Diamond Pet Foods (Diamond or project applicant) operates a pet food production facility in the City of Ripon. The existing facility, which is housed almost entirely within a 366,000-square-foot structure, currently consists of three production lines, each of which is capable of producing 260 tons per day. Diamond proposes to add a fourth production line to the existing facility. The expansion would be contained entirely within the existing physical structure of the facility. The addition of a fourth production line would increase the total production capacity of the facility by one-third from 780 tons /day to 1,040 tons/day. The City is considering approval of a Major Site Plan Permit to allow installation and operation of the fourth production line. This chapter includes a detailed description of the proposed Diamond Pet Foods Project, including project objectives, location, existing facilities, proposed new production line, and the anticipated schedule for project construction.

2.1 PROJECT OBJECTIVES

The project applicant has provided the following objectives for the project:

- ▶ expand the current pet food production capacity to better meet industry demands;
- ▶ utilize the existing layout/operating space and infrastructure of the facility, which was originally designed in 2010 for four production lines. This avoids additional excavation and ground-disturbance;
- ▶ utilize the existing regenerative thermal oxidation (RTO) system installed in 2018 for control of production emissions as designed to (1) abate emissions from up to four production lines and (2) maximize operating efficiency (lowest fuel usage rate) during operation of four production lines;
- ▶ utilize the existing transportation infrastructure for continued truck and rail deliveries to and from the facility; and
- ▶ minimize environmental impacts to surrounding areas, including residential communities and other sensitive land uses.

2.2 PROJECT LOCATION

The Diamond Pet Foods Production Facility (project site) is a pet food production facility located in an industrial area within the City of Ripon, in San Joaquin County (Figure 2-1). The address of the facility is 942 South Stockton Avenue, Ripon, CA 95366. The Diamond Pet Foods property totals approximately 157 acres, of which the existing production facility occupies approximately 27 acres (including buildings, paved parking areas, paved driveways, and other impervious surface areas).

The project site is bounded by industrial uses to the north, railroad tracks and State Route (SR) 99 to the east, the Stanislaus River to the south, and undeveloped land to the west. Oak Grove Park is located to the southwest and residential areas are located further to the north, on both sides of SR 99. Regional access to the site is provided by SR 99 and Main Street Overcrossing (which connects SR 99 and South Stockton Avenue).

2.3 EXISTING FACILITIES

Diamond is a premium producer of over 150 different pet food recipes. After acquiring the project site in 2010, Diamond remodeled the facility, which had previously housed the Neenah Paper mill, to accommodate a maximum of four pet food production lines. Diamond started producing pet food at the Ripon facility in 2012, under permits issued by the City of Ripon, the State Regional Water Quality Control Board, and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Three production lines, with a total combined capacity of 780 tons per day of pet food, were initially permitted by SJVAPCD and installed between 2010 and 2012.



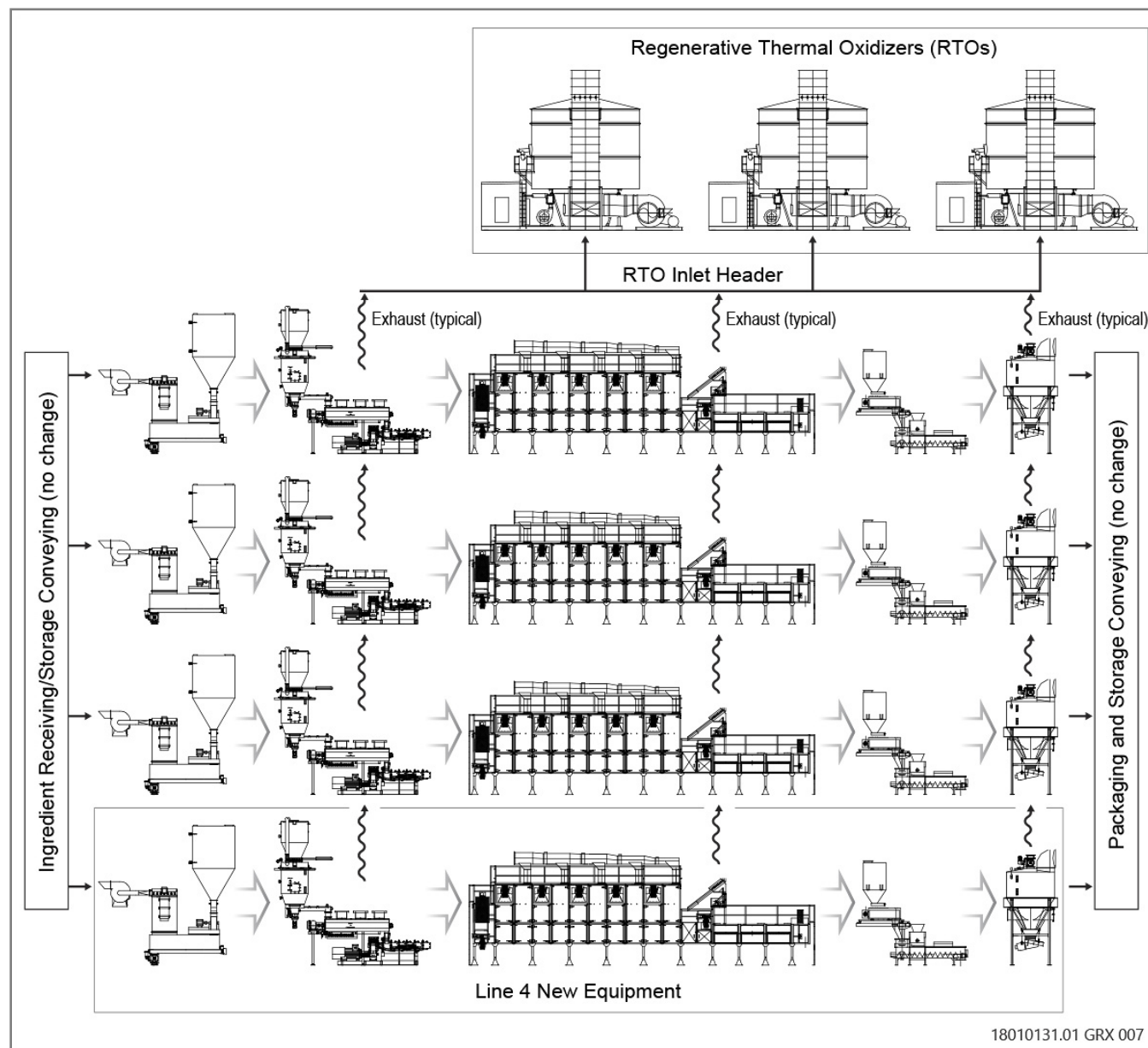
Source: Data adapted by Ascent Environmental in 2018

Figure 2-1 Project Location

Diamond produces pet food by measuring and loading the meat, grain, water, and other ingredients into steam conditioner units (one per line), where mixing and pasteurization occurs, followed by forming (extruding) the pet food into kibbles, which are then carried from the extruders to the dryers and other systems for further processing.

At each stage of the production line, the kibble is collected and transported through vacuum tubes to the next part of the process using a blower/cyclone system. Each production line requires four blowers to provide the vacuum that moves the kibble through the facility. The exhaust from the blowers is vented through the RTO system for odor abatement.

Figure 2-2 depicts a simplified version of the production process. Figures 2-3 and 2-4 show photos of the existing production equipment, and the location for the proposed fourth production line.



Source: Provided by Yorke Engineering in 2018

Figure 2-2 Diamond Pet Foods Production Facility Process Sketch



Source: Provided by Yorke Engineering in 2018

Figure 2-3 Existing Three Lines (Steam Conditioners) with Space for Fourth Conditioner



Source: Provided by Yorke Engineering in 2018

Figure 2-4 Existing Three Lines (Dryers) with Space for Fourth Dryer

2.4 ODOR ABATEMENT BACKGROUND

In July 2012, shortly after Diamond's facility became operational, the first odor complaint was registered with SJVAPCD, followed by a total of 103 odor complaints for the period from November 2012 through April 2013. In late 2012, Diamond hired Yorke Engineering to assist in evaluating the source, cause, and available methods to eliminate the odors and demonstrate compliance with the permit conditions listed in the Authority to Construct permit from SJVAPCD. The City of Ripon, by and through its Code Enforcement staff, also monitored the facility in response to citizen concerns.

As a result of the odors analysis conducted by Yorke Engineering, LLC, in consultation with SJVAPCD and based on the available information at the time, Diamond determined that the best option for controlling odors was to install a cold plasma injection system, which was reported to be successful in Europe and Canada for reducing pet food production odors. The Uniqair (manufacturer) cold plasma system was permitted by SJVAPCD, installed in 2014, and became operational in July 2014. This system, however, achieved inconsistent results and odor complaints continued after the system was installed and operating.

As a result of coordination with SJVAPCD and additional research into the remaining options to reduce odors, it was determined that the technology with the highest proven odor abatement efficiency was an RTO system. The RTO system uses a natural gas-fired combustion chamber, which operates at approximately 1,650 degrees Fahrenheit, to thermally oxidize odorous compounds present in the pet food production exhaust into non-odorous carbon dioxide (CO₂) and water (H₂O). The system is designed to recover the heat from the outgoing RTO exhaust gases and preheat the incoming unabated production exhaust, thereby making the most efficient use of natural gas.

In June 2017, Diamond selected Durr Systems to design, fabricate, and supervise the installation of the new RTO system, consisting of three RL-60 Units, each with an additional eight feet of combustion chamber height to provide additional residence/reaction time at the operating temperature. Installation of the RTO system was approved in spring 2018 by SJVAPCD to replace the existing cold plasma injection system. Installation of the RTO equipment, which has the capacity to treat the dispelled air from the three existing production lines, as well as the proposed fourth production line, was completed in December 2018. The RTO system became fully operational on December 14, 2018.

Figures 2-5, 2-6, and 2-7 show photos of the RTO equipment during the installation process.



Source: Provided by Yorke Engineering in 2018

Figure 2-5 New RTO Equipment Being Installed at Diamond's Ripon Facility (Fall 2018)



Source: Provided by Yorke Engineering in 2018

Figure 2-6 Newly Installed (as of December 2018) RTO Equipment at Diamond's Ripon Facility



Source: Provided by Yorke Engineering in 2018

Figure 2-7 Newly Installed (as of December 2018) RTO Inlet Connections at Diamond's Ripon Facility

2.5 DESCRIPTION OF THE PROPOSED PROJECT

2.5.1 Fourth Production Line

The City of Ripon is considering approval of a Major Site Plan Permit to allow installation and operation of a proposed fourth pet food production line at Diamond's Ripon facility. The fourth production line would increase the permitted total production capacity to 1,040 tons per day (an increase of 260 tons per day from the existing capacity of 780 tons per day). Included in this application is a proposal to modify the permit conditions for the existing Pet Food Material Dispensing, Pre-Grinding, Conveying and Storage Operations (N-8234-2), to accommodate the incremental raw material transfer from outside storage to the mill tower. The modified permit condition would increase the maximum daily material transfer from the pre-grind system and the outside silos/bins from approximately 800 to 1,100 tons per day and increase the maximum annual material transfer from approximately 90,000 to 120,000 tons per year.

To facilitate the increase in pet food production, an additional steam conditioning unit/extruder would be installed in the steam conditioner room, as well as a fourth natural gas-fired dryer, dryer-cooler, and vertical cooler (see Figures 2-3 and 2-4). Additional blowers, kibble take-up tubes, associated cyclones, and attrition handling equipment would also be installed within the existing production building.

The two existing boilers are permitted for, and currently have adequate capacity to handle the incremental steam requirements of the fourth steam conditioning unit, as well as any other steam requirements.

The existing packaging lines are permitted to handle a total of 1,200 tons per day of product, and the addition of the fourth production line does not require an increase in this limit.

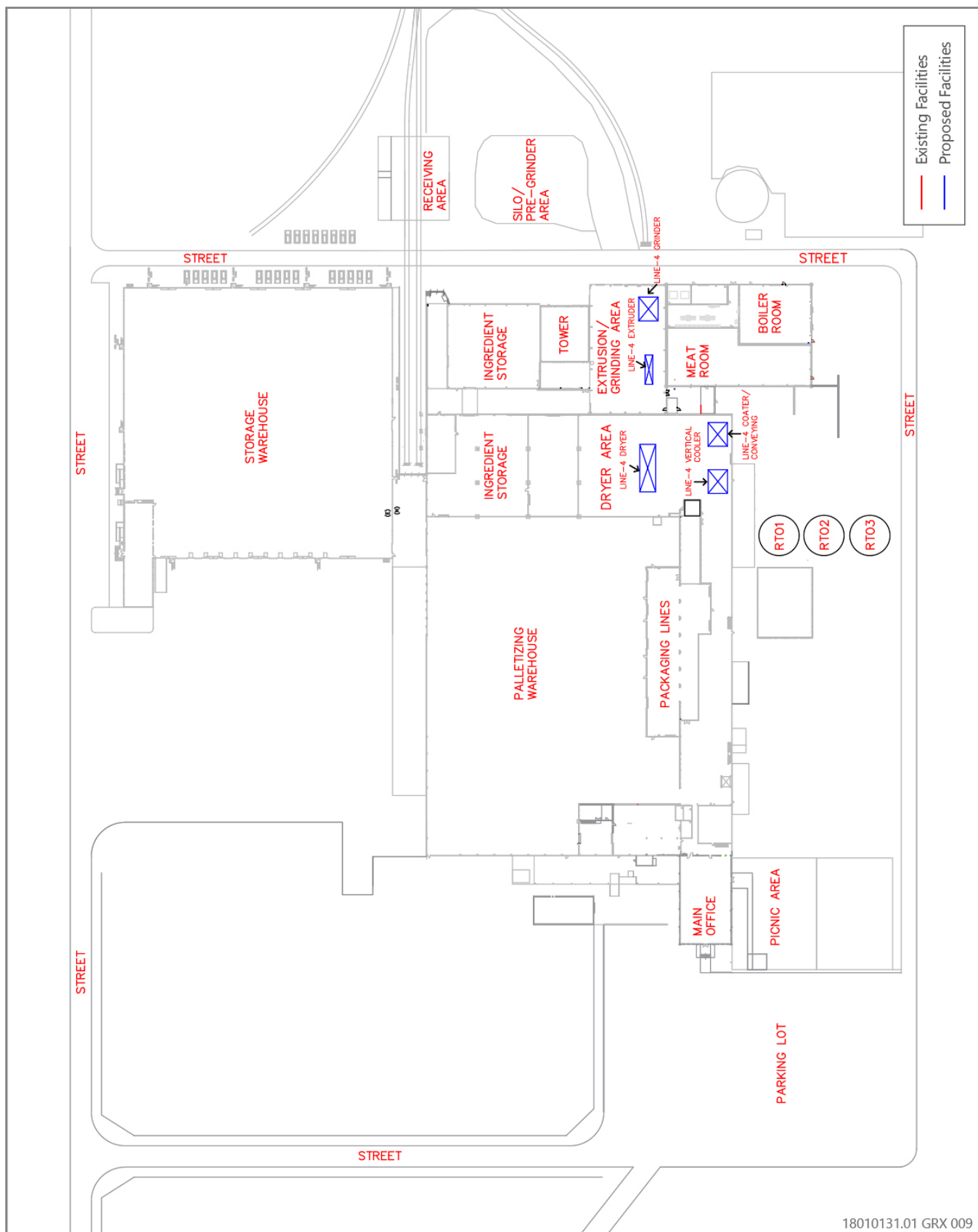
On a side note, the demand for pet food in smaller bag sizes has recently increased, requiring packaging equipment (packagers) capable of handling the smaller bags. To handle this change in the market, two additional product packagers would be needed to handle the placement of product into the smaller bags. Diamond may seek to add these additional packagers; however, the need for the packagers is not related to the proposed fourth production line. The additional packagers would be needed whether or not the fourth production line project is approved, therefore, any new proposal to add packagers would have independent utility and would undergo the necessary approval process apart from and outside of the currently proposed fourth line project and is therefore not included in this EIR's evaluation.

All of the new equipment and facilities associated with the proposed fourth production line would be located inside the existing building. Figure 2-8 shows the project site plan with the existing and proposed facilities.

UTILITIES

The existing onsite groundwater well provides water to the existing Diamond Pet Foods Production Facility. Existing groundwater use at the facility for pet food production is 10,500 gallons per day (gpd). The groundwater is currently treated onsite by reverse osmosis. The project would require an increase of 3,500 gpd in groundwater withdrawal to supply the boiler and the reverse osmosis conditioning cylinders, which is an increase of approximately 33 percent based on existing usage.

Wastewater at the facility comes from the wash-down of the reverse osmosis cylinders and from the peaker power plant east of the facility. The wastewater is treated onsite by Diamond's clarifier and evaporation ponds, all of which are permitted by the State Regional Water Quality Control Board. The existing Diamond Pet Foods Production Facility generates an average of 9,000 gpd of wastewater, while the maximum capacity of the system is 12,000 gpd. The project would result in an incremental increase in wastewater generation amounting to approximately 1,600 gpd, which is an increase of approximately 13 percent based on the maximum capacity of the system. There would be no increase in wastewater from the peaker plant. Similar to existing operating conditions, the project's wastewater would be treated onsite by Diamond's clarifier and evaporation ponds.



Source: Prepared and provided by Yorke Engineering in 2019

Figure 2-8 Site Plan

Electricity is provided to the facility by the Modesto Irrigation District. Existing electricity usage at the facility is 24,000 megawatt hours per year. With the addition of the fourth production line, it is estimated that the facility would use an additional 4,800 megawatt hours per year (a 20-percent increase).

Natural gas is provided to the facility by the Pacific Gas & Electric Company. For the calendar year 2017, natural gas usage at the facility was 2,200,364 therms. This historical natural gas usage does not reflect the increase due to the RTOs. With the addition of the fourth production line and the RTOs, it is estimated that the facility would use 1,187,344 therms more (an increase of 876,000 therms or 25 percent due to RTO units and the fourth line).

DELIVERIES

Currently, raw material deliveries to the facility arrive by truck and rail. With the addition of the fourth production line, the number of truck deliveries would increase for both raw material and finished product. In the case of rail deliveries, the number of deliveries of raw material rail cars would increase, although the number of locomotives delivering the rail cars is not projected to change. Table 2-1 presents the number of truck and rail deliveries to/from the existing facility and how that would change with implementation of the project. In total, the project would result in an increase of 147 trucks per week. No physical modifications to the truck or railcar facilities are required to accommodate the production increase.

Table 2-1 Summary of Existing and Future Truck and Rail Deliveries to/from the Diamond Facility

Type of Delivery	Existing Conditions ¹	Existing + Project Conditions	Difference
Raw Material Deliveries to the Facility	114 HHDT trucks/week	171 HHDT trucks/week	+57 HHDT trucks/week
Product Deliveries from the Facility	190 HHDT trucks/week	280 HHDT trucks/week	+90 HHDT trucks/week
Supply Deliveries to the Facility	5 HHDT trucks/week	5 HHDT trucks/week	No difference
Delivery Locomotive ² to the Facility	62 line-haul locomotives/month	62 line-haul locomotives/month	No difference
Switching Locomotive (onsite Trakmobile)	62 switching locomotives/month	62 switching locomotives/month	No difference

Notes: HHDT = heavy-heavy-duty trucks

¹ The existing facility operates seven days per week and would continue to operate as such after the project is implemented.

² The number of locomotives (engines) will remain constant, as a set number of locomotives can easily handle the increases number of railcars by moving more cars into the site at a time.

Source: Data provided by Diamond Pet Foods in 2018 and 2019

Under current operations, the facility operates 24 hours/day, while raw material/supply deliveries to and product shipments from the facility mainly occur Monday through Friday between 7 a.m. and 5 p.m. (although there also are some shipment received and dispatched over the weekend). The incremental increase in truck shipments would occur within the total available shipment window of 5 a.m. to 10 p.m. No shipments out of the facility would be scheduled during the noise sensitive hours of 10 p.m. and 4 a.m. Also, raw material deliveries would not come to the plant between 10 p.m. and 4 a.m.

The current truck route to and from the facility includes SR 99, Main Street Overcrossing, and South Stockton Avenue (see Figure 2-1). The same truck route would be used following project implementation.

2.6 OPERATION AND MAINTENANCE

The facility would have the same operating hours and work shifts as it does currently. There are four shifts, with 12 employees per shift, for a total of 48 employees. Shift changes occur at 6 a.m. and 6 p.m. Routine maintenance would continue as needed for existing and new equipment at the facility. Operation of the facility would require two additional employees per shift. Therefore, a total of eight additional employees would be required.

The project would operate according to an odor management plan (OMP) that has been prepared specifically for the DPF-Ripon facility by Yorke Engineering in June 2020, in close coordination with staff from Ascent Environmental, City of Ripon, and Diamond Pet Foods. Yorke specializes in air pollution emissions management and compliance, including odor management. The OMP would minimize potential for substantial exposure of sensitive receptors to odors as a result of the proposed fourth production line. The proposed OMP is included as Appendix D of this Draft EIR. The OMP details the odor-emitting activities associated with the facility and odor control practices and also includes a detailed odor complaint tracking and response system. The proposed odor complaint tracking system involves recording all complaints received by either SJVAPCD (the recommended complaint recipient), the City, and/or DPR-Ripon, and sharing each complaint with the other two organizations. This information sharing promotes more consistent odor complaint verification and thorough record-keeping. The odor complaint response system involves three tiers of response, each successive tier more rigorous than the previous. Odor response actions range from systems checks to reduction in pet food production (if determined necessary by the City) by up to 25 percent, equivalent to the production of the proposed fourth line. Please see Appendix D for additional detail.

2.7 PROJECT CONSTRUCTION

Fabrication of the equipment for the fourth production line would be performed by Extrutech at a location outside of California. Installation of the equipment at the Diamond facility would last for three to four months, beginning in 2020, depending on the fabrication lead time. The three existing production lines would remain operational during construction of the fourth line. Activities would be phased as follows:

- ▶ receive approval of entitlement from the City for the fourth production line,
- ▶ receive Authority to Construct permit from SJVAPCD,
- ▶ order equipment from Extrutech,
- ▶ receive equipment approximately 10 months after initial equipment order, and
- ▶ install equipment at the Diamond facility.

Delivery of the fourth production line components to the project site from Extrutech would require 44 truck trips. Installation activities at the Diamond facility would require an average of 15 construction workers and one heavy duty truck per day for the entire three- to four-month installation period. Installation activities would typically occur Monday through Friday, but may also involve work on Saturday or Sunday. Installation would occur inside the building at various locations, depending on the process equipment being installed. Ground-disturbing construction activities, such as grading and excavation, would not be required for equipment installation.

2.8 POTENTIAL PERMITS AND APPROVALS REQUIRED

As the lead agency under CEQA, the City is responsible for considering the adequacy of the EIR and determining if the overall project should be approved. SJVAPCD is a responsible agency and will need to issue an Authority to Construct permit for the project. No other permits or approvals from other agencies are anticipated to be required.

3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter is organized by environmental resource category; each resource category is organized to provide an integrated discussion of the existing environmental conditions (including regulatory setting and environmental setting), potential environmental effects (including direct and indirect impacts), and measures to reduce significant effects, where feasible, of construction and operation of the Diamond Pet Foods Project.

Cumulative and growth-inducing impacts are discussed in Chapters 4, “Cumulative Impacts,” and 5, “Other CEQA Sections,” respectively.

APPROACH TO THE ENVIRONMENTAL ANALYSIS

In accordance with Section 15126.2 of the State CEQA Guidelines, this Draft EIR identifies and focuses on the significant direct and indirect environmental effects of the project, giving due consideration to both its short-term and its long-term effects. Short-term effects are generally those associated with construction, and long-term effects are generally those associated with facility operations. As described in Chapter 1, “Introduction,” this analysis focuses on a limited number of environmental resource topics because other topics have already been addressed in the Initial Study (see Appendix A).

The remainder of this chapter addresses the following resource topics:

- ▶ Section 3.1, Air Quality
- ▶ Section 3.2, Greenhouse Gas Emissions and Climate Change
- ▶ Section 3.3, Energy

Sections 3.1 through 3.3 follow the same general format:

Regulatory Setting presents the laws, regulations, plans, and policies that are relevant to each issue area. Regulations originating from the federal, state, and local levels are each discussed as appropriate.

Environmental Setting presents the existing environmental conditions on the project site and in the surrounding area as appropriate, in accordance with State CEQA Guidelines (California Code of Regulations [CCR] Section 15125). This setting generally serves as the baseline against which environmental impacts are evaluated. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale).

Environmental Impacts and Mitigation Measures identifies the thresholds of significance used to determine the level of significance of the environmental impacts for each resource topic, in accordance with the State CEQA Guidelines (CCR Sections 15126, 15126.2, and 15143). The thresholds of significance used in this Draft EIR are based on the checklist presented in Appendix G of the State CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies. The level of each impact is determined by comparing the effects of the project to the environmental setting. Key methods and assumptions used to frame and conduct the impact analysis as well as issues or potential impacts not discussed further (such issues for which the project would have no impact) are also described.

Project impacts are organized numerically in each subsection (e.g., Impact 3.1-1, Impact 3.1-2, Impact 3.1-3). A bold-font impact statement, a summary of each impact, and its level of significance precedes the discussion of each impact. The discussion that follows the impact summary includes the substantial evidence supporting the impact significance conclusion.

The Draft EIR must describe any feasible measures that could avoid, minimize, rectify, reduce, or compensate for significant adverse impacts, and the measures are to be fully enforceable through incorporation into the project and adoption of a Mitigation Monitoring and Reporting Plan (Public Resources Code Section 21081.6[b]). Mitigation measures are not required for effects that are found to be less than significant. Where feasible mitigation for a significant impact is available, it is described following the impact along with its effectiveness at addressing the impact. Each identified mitigation measure is labeled numerically to correspond with the number of the impact that would be mitigated by the measure. Where sufficient feasible mitigation is not available to reduce impacts to a less-than-significant level, or where the City lacks the authority to ensure that the mitigation is implemented when needed, the impacts are identified as remaining "significant and unavoidable."

3.1 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable air quality regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the Diamond Pet Foods Project. The methods of analysis for short-term construction, long-term regional (operational), local mobile-source, and toxic air emissions are consistent with the San Joaquin Valley Air Pollution Control District's (SJVAPCD or District) *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a), *Framework for Performing Health Risk Assessments* (SJVAPCD 2015b), and *Guidance for Air Dispersion Modeling* (SJVAPCD 2006), as well as recommendations of staff at SJVAPCD and the California Air Resources Board (CARB).

3.1.1 Regulatory Setting

Air quality in the project area is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the air basin are discussed below.

FEDERAL

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments were made by Congress in 1990. EPA's air quality efforts address both criteria air pollutants and precursors and hazardous air pollutants (HAPs). EPA regulations concerning criteria air pollutants and precursors and HAPs are presented in greater detail below.

Criteria Air Pollutants

The CAA required EPA to establish national ambient air quality standards (NAAQS) for six common air pollutants found all over the U.S. referred to as criteria air pollutants. EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter with aerodynamic diameter of 10 micrometers or less (PM₁₀) and fine particulate matter with aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), and lead. The NAAQS are shown in Table 3.1-1. The primary standards protect public health and the secondary standards protect public welfare. The CAA also required each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. California's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, EPA may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Table 3.1-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS) ¹²	National (NAAQS) ³	
			Primary ²⁴	Secondary ²⁵
Ozone	1-hour	0.09 ppm (180 µg/m ³)	— ⁵	Same as primary standard
	8-hour	0.070 ppm (137 µg/m ³)	0.070 ppm (147 µg/m ³)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	Same as primary standard
	8-hour	9 ppm ⁶ (10 mg/m ³)	9 ppm (10 mg/m ³)	
Nitrogen dioxide (NO ₂)	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
Sulfur dioxide (SO ₂)	24-hour	0.04 ppm (105 µg/m ³)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
Respirable particulate matter (PM ₁₀)	Annual arithmetic mean	20 µg/m ³	—	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	
Fine particulate matter (PM _{2.5})	Annual arithmetic mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
	24-hour	—	35 µg/m ³	Same as primary standard
Lead ⁶	Calendar quarter	—	1.5 µg/m ³	Same as primary standard
	30-Day average	1.5 µg/m ³	—	—
	Rolling 3-Month Average	—	0.15 µg/m ³	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	No national standards	
Sulfates	24-hour	25 µg/m ³		
Vinyl chloride ⁶	24-hour	0.01 ppm (26 µg/m ³)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m³ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

- California standards for ozone, carbon monoxide, SO₂ (1- and 24-hour), NO₂, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2016a

Hazardous Air Pollutants and Toxic Air Contaminants

Toxic air contaminants (TACs), or in federal parlance, HAPs, are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 3.1-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for air toxics to limit emissions.

STATE

CARB 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 (CCAA). The CCAA, which was adopted in 1988, required CARB to establish California ambient air quality standards (CAAQS) (Table 3.1-1).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources. The CCAA also provides air districts with the authority to regulate indirect emission sources.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Hot Spots Act) (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, particulate matter (PM) exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the State's cap-and-trade program for greenhouse gas emissions. AB 617 imposes a new state-mandated local program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. The bill requires CARB to identify high-pollution areas and directs air districts to focus air quality improvement efforts through adoption of community emission reduction programs within these identified areas. Currently, air districts review individual sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring community-wide air quality assessment and emission reduction planning.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be 85 percent less in 2020 in comparison to year 2000 (CARB 2000). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

Sierra Club v. County of Fresno

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704). The case reviewed the long-term, regional air quality analysis contained in the Environmental Impact Report (EIR) for the proposed Friant Ranch development. The project is located in unincorporated Fresno County within the San Joaquin Valley Air Basin (SJVAB), an air basin currently in nonattainment for multiple NAAQS and CAAQS, including ozone and PM. The Court ruled that the air quality analysis failed to adequately disclose the nature and magnitude of long-term significant air quality impacts from emissions of criteria pollutants and precursors "in sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises." The Court noted that the air quality analysis, which showed that the project substantially exceeded the threshold of significance, did not provide a discussion of the foreseeable adverse effects of the project-generated emissions on Fresno County's likelihood of exceeding the NAAQS and CAAQS for criteria air pollutants nor did it explain a connection between the project's emissions and deleterious health impacts. Moreover, as noted by the Court, the EIR did not explain why it was not "scientifically possible" to determine such a connection. The Court concluded that "because the EIR as written makes it impossible for the public to translate the bare numbers provided into adverse health impacts or to understand why such translation is not possible at this time," the EIR's discussion of air quality impacts was inadequate. This Draft EIR includes discussions related to the relationship between criteria air pollutants and associated health effects.

LOCAL

San Joaquin Valley Air Pollution Control District

Criteria Air Pollutants

SJVAPCD is the primary agency responsible for planning to meet NAAQS and CAAQS in the SJVAB, in which the project site is located. SJVAPCD works with CARB and EPA to maintain the region's portion of the SIP for ozone and PM_{2.5}. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the NAAQS for ozone and PM_{2.5}. The SJVAB has been designated as nonattainment with respect to the NAAQS and CAAQS for ozone and PM_{2.5} (SJVAPCD 2012).

SJVAPCD also enforces air quality regulations, educates the public about air quality, and implements a number of programs to provide incentives for the replacement or retrofit of older diesel engines and to influence land use development in the SJVAB.

All projects are subject to adopted SJVAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the project may include but are not limited to the following:

- ▶ **Rule 2010—Permits Required:** This rule applies to anyone who plans to or does operate, construct, alter, or replace any source operation that may emit air contaminants or may reduce the emission of air contaminants. The project would be subject to SJVAPCD permitting requirements for stationary sources.
- ▶ **Rule 2201—New and Modified Stationary Source Review Rule:** This rule applies to all new stationary sources and all modifications of existing stationary sources. Stationary sources are subject to SJVAPCD permit requirements if, after construction, they emit or may emit one or more affected pollutant.
- ▶ **Rule 2550—Federally Mandated Preconstruction Review for Major Sources of Air Toxics:** This rule applies to applications to construct or reconstruct a major air toxics source.
- ▶ **Rule 3135—Dust Control Plan Fee:** This rule requires applicants to submit a fee in addition to a dust control plan. The purpose of this fee is to recover SJVAPCD's cost for reviewing such plans and conducting compliance inspections.
- ▶ **Rule 4002—National Emissions Standards for Hazardous Air Pollutants:** This rule applies to all sources of hazardous air pollutants and requires them to comply with the standards, criteria, and requirements set forth therein.
- ▶ **Rule 4101—Visible Emissions:** This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- ▶ **Rule 4102—Nuisance:** This rule applies to any source operation that emits or may emit air contaminants and/or odors. If such emissions create a public nuisance, the owner/operator could be in violation and be subject to enforcement action by SJVAPCD.

In addition, if modeled construction- or operation-related emissions for a project exceed SJVAPCD's mass emission thresholds for criteria air pollutants and precursors then SJVAPCD recommends implementing mitigation to reduce these emissions. SJVAPCD's mass emission thresholds are presented in Section 3.1.3, "Environmental Impacts and Mitigation Measures."

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under SJVAPCD Rule 2010 ("Permits Required"), Rule 2201 ("New and Modified Stationary Source Review"), and Rule 2550 ("Federally Mandated Preconstruction Review for Major Sources of Air Toxics"), all sources that possess the potential to emit TACs are required to obtain permits from SJVAPCD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SJVAPCD limits emissions and public exposure to TACs through multiple programs. SJVAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., residences, schools, hospitals), that may experience adverse effects from unhealthful concentrations of air pollutants.

Odors

Although odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SJVAPCD. SJVAPCD Rule 4102 ("Nuisance") regulates odorous emissions.

City of Ripon

City of Ripon General Plan

Relevant policies and standards from the City's General Plan related to air quality are described below (City of Ripon 2006:5-3).

GOAL E: To conserve air quality within the planning area.

- ▶ **Policy E1.** Coordinate air quality efforts with other local, regional and state agencies.
- ▶ **Policy E2.** Identify and implement measures to reduce emissions associated with future development through the CEQA review process.
- ▶ **Policy E3.** Emphasize alternatives to motorized transportation.
- ▶ **Policy E4.** The Air Quality Attainment Plan prepared by SJVACD is incorporated by reference to this Chapter of the General Plan (Chapter 5).

3.1.2 Environmental Setting

The project site is in the City of Ripon, which is in the SJVAB. The SJVAB includes all of Fresno, Kings, Madera, Merced, Stanislaus, and Tulare Counties and the valley portion of Kern County. Ambient concentrations of air pollutants are determined by the levels of emissions released by pollutant sources and the ability of the atmosphere to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below (SJVAPCD 2015a:16–18).

TOPOGRAPHY, METEOROLOGY, AND CLIMATE

The SJVAB is the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide. The SJVAB is bordered by the Sierra Nevada Mountains in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the SJVAB.

The SJVAB is in a Mediterranean Climate Zone and is influenced by a subtropical high-pressure cell most of the year. Rainfall is sparse, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees F (°F).

The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions in the SJVAB. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the ground level. Pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500–3,000 feet).

Winter-time high pressure events can often last many weeks with surface temperatures often lowering to 30–40°F. During these events, fog can be present, and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet.

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and oxides of nitrogen under the influence of sunlight (SJVAPCD 2015a:16–18).

CRITERIA AIR POLLUTANTS

Concentrations of emissions from criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the SJVAB is provided below.

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. Ozone is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_x are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels.

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Long-term health effects include chronic bronchitis and chronic obstructive pulmonary disease (EPA 2016a).

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is most present in urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit, primarily, nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 . The combined emissions of NO and NO_2 are referred to as NO_x and are reported as equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local sources of NO_x emissions (EPA 2016a; EPA 2017).

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10} . PM_{10} consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013:1-20). Fine particulate matter ($\text{PM}_{2.5}$) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM_{10} emissions in the SJVAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and demolition, and particles from residential fuel combustion. Emissions of $\text{PM}_{2.5}$ in the SJVAB are dominated by the same sources as emissions of PM_{10} (CARB 2013:4-27).

A number of adverse health impacts have been associated with exposure to both $\text{PM}_{2.5}$ and PM_{10} (CARB 2017a). Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. For $\text{PM}_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $\text{PM}_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide. Long-term (months to years) exposure to $\text{PM}_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.

Attainment Status

The attainment status of the SJVAB with respect to the NAAQS and CAAQS for criteria air pollutants is summarized in Table 3.1-2.

Table 3.1-2 Attainment Status Designations for the San Joaquin Valley Air Basin

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone (1-hour)	No federal standard	Nonattainment/Severe
Ozone (8-hour)	Nonattainment/Extreme	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility Reducing Particles	No federal standard	Unclassified
Vinyl Chloride	No federal standard	Attainment

Source: SJVAPCD 2012

Emissions Inventory

Table 3.1-3 summarizes the inventory of criteria air pollutant and precursor emissions in San Joaquin County broken down by source categories. According to this inventory, on-road mobile sources are the largest contributor of NO_x accounting for approximately 52 percent of the total NO_x emissions. Areawide sources account for approximately 84 percent and 61 percent of the County's PM₁₀ and PM_{2.5} emissions, respectively.

Table 3.1-3 Inventory of Criteria Air Pollutant and Precursor Emissions for San Joaquin County, 2016

	ROG		NO _x		PM ₁₀		PM _{2.5}	
	tons/day	%	tons/day	%	tons/day	%	tons/day	%
Stationary Sources ¹	12.9	29%	7.4	16%	1.9	7%	1.0	14%
On-Road Mobile Sources ²	9.0	20%	24.0	52%	1.6	6%	0.9	13%
Other Mobile Sources ³	7.5	17%	13.7	30%	1.0	3%	0.8	12%
Area Sources ⁴	14.4	33%	1.4	3%	23.5	84%	4.4	61%
Total	43.9	100%	46.5	100%	27.9	100%	7.2	100%

¹. Stationary sources include electrical utilities, oil and gas production, industrial manufacturing, food and agricultural processing, landfills, water treatment facilities, incinerators, and industrial chemical processes.

². On-road mobile sources include cars and other passenger vehicles, motorcycles, trucks and buses.

³. Other mobile sources include aircraft, trains, boats, off-road recreational vehicles, construction equipment, and farm equipment.

⁴. Area sources include architectural coatings, pesticides, fertilizers, asphalt paving, residential fuel combustion, farming operations, fires, and cooking.

Source: CARB 2017b

TOXIC AIR CONTAMINANTS

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel PM. Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement

method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among these 10 TACs mentioned.

ODORS

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

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can 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; 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.

Based on the type and character of odors detected, the most likely odor-producing compounds from the pet food production are volatile organic compounds (VOCs). Source testing performed on the RTOs by Blue Sky Environmental, Inc. in January 2019 determined that VOCs were reduced by over 99 percent. (Blue Sky is a CARB-certified independent contractor that specializes in gaseous emissions monitoring.) The Odor History Report of Pet Food Manufacturing Facility (Odor History Report), included as Appendix B to this EIR, includes a detailed discussion regarding the chemical makeup of odorous compounds, VOCs, and abatement efficiency. (See Appendix A of the Odor History Report, included as Appendix B of this EIR.)

Odor Abatement Background

The source(s) of the odors were investigated and found to originate from the production exhaust (blower) stacks, which then became the main subject of the subsequent odor abatement efforts. It should be noted that due to the fact that the pet food recipes are constantly changing on the various production lines, Diamond and Yorke Engineering, Inc. have been unable to identify any specific pet food recipe(s) that are more or less odorous than the others. All pet food recipes produce odors, and all need to be abated.

After an investigation of available odor control systems and upon consultation with the SJVAPCD and odor engineers, Diamond installed a cold plasma injection system on all 12 of the outside exhaust stacks in the summer of 2014 to abate the odors. Cold plasma operates by injecting a highly reactive plasma into the blower exhaust, creating a reaction that neutralizes the odor prior to discharge from the blower exhaust stack. The cold plasma is created in the plasma reaction chamber, where oxygen and water vapor present in the incoming air drawn into the chamber are dissociated by means of high-voltage electricity. This produces a non-thermal (low temperature) plasma which, when injected into the odorous exhaust, initiates the oxidation and/or reduction of the odorous compounds in the gas stream.

The cold plasma system started operation in July 2014. Although odor complaints decreased, the system was unable to completely resolve the issue. To supplement the odor abatement from the cold plasma injection system, an odorant injection system was also installed on the most odorous rooftop stacks in March 2017.

After a significant period of operation with both the cold plasma injection and the odorant injection, and upon consultation with the SJVAPCD and odor engineers, DPF-Ripon determined that the current odor abatement system was inadequate, and a much more aggressive odor abatement approach was needed.

As a result, and upon a careful review of the odor abatement systems in use at some of the most persistently odorous sources, the facility installed a Regenerative Thermal Oxidizer (RTO system), appropriately sized for a wide range of exhaust flows and operating temperatures and designed with capacity to abate odors from four production lines. This system was installed in the fall of 2018, began operation in December of 2018, was tested in January of 2019, and continues to operate.

The Durr RTO system installed at the facility is designed for efficient odor abatement and fuel use. The system is composed of 12 separate ceramic heat-exchange beds arranged radially over a proprietary rotating diverter valve. Incoming odor-laden air enters the RTO through the bottom of the unit and is drawn upwards through five of the 12 beds, which have been previously preheated. The air is heated as it passes through the preheated bed and further heated to the temperature setpoint in the combustion chamber near the top of the RTO, where additional energy is added by a natural gas-fired burner to complete the oxidation process. Hot, clean exhaust is then drawn downward through five adjacent ceramic beds to transfer the thermal energy to preheat the media before being exhausted to the atmosphere through a stack. The two "spare" beds serve to prevent cross-contamination between the inlet and outlet sections and to ensure the high destruction efficiency of the RTO.

The three Durr model RL-60 RTOs operate in parallel, with the plant production exhaust entering the units from a common header. Each of the Durr model RL-60 RTOs is a unique single vessel that is capable of destroying more than 95 percent of VOC and HAPs in industrial process exhaust streams. The air permit issued to the facility by the SJVAPCD requires the RTOs to operate at a temperature sufficient to achieve 95 percent VOC abatement. Based on source testing¹ conducted in January of 2019, Diamond determined that RTO operation at 1,500 °F will easily meet the 95 percent VOC destruction efficiency. In addition, in order to achieve the highest level of VOC abatement, DPF-Ripon operates the units at 1,650 °F, which demonstrated a VOC abatement efficiency of 99.8 percent in the January 2019 source tests.

Also, to maximize oxidation of CO to CO₂, Diamond directed Durr to design and construct the RTOs with an additional 8 feet of vertical combustion chamber volume, thereby providing additional residence time at RTO temperature both for the oxidation of CO and for abatement of the odorous air contaminants.

Potential odor-producing compounds from the pet food production are expected to be in the form of VOC emissions. Based on the results of the source testing, the RTOs reduce all VOC emissions from the production lines by 99.8 percent. This means any odorous compounds associated with the production of the pet food are now reduced by more than 99 percent.

Odor Complaint History

Shortly after the facility began operation, odor complaints began to be filed with the SJVAPCD with the first complaint received in July 2012. Between July 2012 and August 2019, there have been a total of 539 complaints received. Approximately 20 percent of the complaints were confirmed by an SJVAPCD Air Quality Inspector (Inspector) or staff member upon investigation. A confirmed complaint is one in which the Inspector is able to notice and identify (verify) the presence of the pet food odor upon meeting with the citizen filing the complaint. For this reason, an odor of short-duration may be difficult for an Inspector to confirm, as it may have dissipated prior to the Inspector's arrival.

Complaints have been found to be highly seasonal, typically occurring during the cooler (fall/winter/early spring) months, although complaints have been filed in every month. The majority of the complaints occur during morning and evening hours, although complaints at other hours of the day have occurred, as well. The Odor History Report (Appendix B) includes a detailed discussion related to the affects of weather on odor and emission controls; Figure 3-4 of the Odor History Report shows the seasonal variation of odor complaints.

Based on complaint records from the SJVAPCD, the majority of the odor complaints are primarily from the neighborhood northeast of the facility and secondarily from the neighborhood northwest of the facility, in the downtown Ripon area. Occasionally, odor complaints have been logged at locations as far south as Salida. Since the installation of the RTOs, most of the 2019 odor complaints have occurred in the same areas.

¹ Initial compliance demonstration source testing was conducted in January 2019. Follow-up source testing is required within 12 months of the initial source test and, if ongoing compliance is demonstrated, at a frequency of not less than every 36 months thereafter.

Table 3.1-4 presents a chart of confirmed versus total complaints received by month and year, from 2012 to August 2019. Table 3.1-4 also shows the seasonal character of the complaints, as well as the history of the cold plasma and RTO odor abatement systems. This shows graphically how the odor complaints change from season to season and from year to year, as well as the relative effectiveness of the various odor abatement systems. Table 3.1-4 also shows that approximately 85 percent of all odor complaints have occurred during the cooler months, from late fall through mid-spring, and are prevalent mostly during stable (low dispersion and mixing) atmospheric conditions.

Table 3.1-5 presents the average monthly complaints received on the basis of each control technology. As shown in Table 3.1-5, there was a reduction in the average number of confirmed monthly odor complaints after the installation of the cold plasma system; however, over time, this reduction was deemed insufficient to solve the odor problem, in part due to the adverse weather conditions in the colder months and, possibly, as people grew tired of the odor. Since the RTO system began the stable operating period, there has been one confirmed complaint (an average 0.2 confirmed complaints per month from January through October).

Table 3.1-4 Monthly Confirmed¹ Odor Complaints/Total Odor Complaints from Initial Startup (July 2012) through July 2019

YEAR	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
2012	Facility Under Construction						0/1	0/5	1/2	0/3	8/10	4/17
2013	5/23	13/33	6/13	1/7	2/5	1/4	3/8	4/8	0/2	1/5	0/4	2/12
2014	1/15	0/8	1/5	1/13	0/1	1/5	0/4	0/0	0/0	0/5	3/14	3/13
2015	2/8	2/11	3/7	2/4	1/1	0/0	0/0	0/2	0/2	0/1	1/6	6/11
2016	1/8	1/7	4/7	1/4	0/2	0/0	0/1	0/1	0/2	2/9	3/6	0/3
2017	6/16	6/15	0/8	3/13	1/5	1/1	0/1	2/4	0/4	9/18	15/20	6/12
2018	9/12	3/8	10/14	2/3	0/0	1/1	0/0	0/0	1/4	5/11	2/7	1/3
2019	0/0	0/3	0/4	1/5	0/1	0/0	0/0	0/0	1/4	0/0	0/0	0/0
2020	0/0	0/1	0/2									

Notes: Blue highlighted cells = no odor control; orange highlighted cells = cold plasma injection odor control; green highlighted cells = RTO odor control.

1. A confirmed odor complaint is one in which the SJVAPCD Air Quality Inspector is able to notice and identify (verify) the presence of the pet food odor upon meeting with the resident filing the complaint.
2. The RTO system began operation on December 14, 2018. From December 14 to December 31, 2018, the initial run-in period occurred, wherein Diamond and Durr worked on the RTOs to make a number of the necessary fine tuning/operational adjustments to ensure optimal performance in preparation for the January compliance source testing. On December 15, 2018, a single odor complaint was logged with the SJVAPCD, but because the system was in the initial run-in period, the operation during this period should not be considered normal and representative of the RTO. The RTO initial run-in period was a one-time event, and the plant is not expected to operate in this configuration again.

Source: Yorke Engineering 2019

Table 3.1-5 Complaints Associated with Odor Control Systems

Operation & Odor Abatement Status	Confirmed Complaints/ Total Complaints	Average Number of Confirmed Complaints/Month
Pre-Operation; Conversion from Neenah Paper to DPF-Ripon	No Complaints	Not Applicable
DPF-Ripon Operational; Pre-Odor Control Operation Period	55 Confirmed/ 209 Total Complaints	2.3 Confirmed/Month
DPF-Ripon Operational; Cold Plasma Odor Control Period	118 Confirmed/ 318 Total Complaints	2.2 Confirmed/Month
DPF-Ripon Operational; Regenerative Thermal Oxidation	2 Confirmed/ 17 Total Complaints	0.2 Confirmed/Month

Source: Yorke Engineering 2019

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. Sensitive receptors closest to the Diamond Pet Food facility include the neighborhood of single-family homes east of Highway 99—the closest house in this neighborhood is approximately 1,150 feet away. There are also residential land uses west of South Stockton Avenue—the closest of which is approximately 1,850 feet away.

3.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs and odors were assessed in accordance with SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a). The project's emissions are compared to SJVAPCD-adopted thresholds. All emission calculations and dispersion modeling were conducted by Yorke Engineering in a report titled *Line 4 Air Quality Technical Report* (Yorke Engineering 2019a), with a follow-up letter to SJVAPCD (dated August 18, 2020) addressing revised PM₁₀ and PM_{2.5} emissions and ambient modeling. The full 2019 report as well as the August 18, 2020 letter to SJVAPCD are provided in Appendix B.

Emissions of criteria air pollutants and precursors associated with installation of the fourth production line were estimated using the construction module of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2016).

The incremental increase in operational emissions associated with the project includes emissions generated by new equipment that would be part of the fourth production line, as well as increased use of equipment that is already used to support the existing three production lines at the facility. Emissions associated with the new dryer and hammermill were estimated based on the maximum permitted throughput capacity of 260 tons per day for Line 4 (1/4 of the maximum daily pet food production capacity for the entire facility). Emissions associated with increased operation of the existing equipment were estimated based on the emission factors stated in the permits for that equipment, including the existing equipment used for pet food material dispensing, pre-grinding, grinding, mixing, extrusion, conveying, and packaging; the existing boilers; and the existing RTO system. Emissions generated by increased vehicle trips associated with the commutes of additional workers and trucks bringing input materials to the facility and hauling finished products away from the facility were estimated using CARB's Web-Based Mobile-Source Emission Factor Model (EMFAC2017) (CARB 2017c). As part of the Ambient Air Quality Analysis conducted for the project, dispersion modeling was performed to analyze the potential local impact of criteria air pollutants (Yorke Engineering 2019a).

Between the issuance of the 2019 *Line 4 Air Quality Technical Report* and the August 2020 letter to SJVAPCD (both provided in Appendix B), several equipment and permit modifications were submitted which result in reductions to the PM₁₀ and PM_{2.5} emissions profiles, as follows:

- a) Addition of two new product packaging lines to allow for packaging of product into smaller bags. Although all packaging line vents have been diverted back into the building, the pre-diversion emissions were conservatively used for recent PM_{2.5} AAQA analysis;
- b) A reduction in the estimated PM₁₀ production line emission, based on January 2019 source testing;
- c) Reduction in PM₁₀ emissions potential due to removal of the pre-grinder from service at permit unit 2 (this equipment is no longer needed for the process).

The level of health risk from exposure to operational TAC emissions was assessed based on a health risk assessment (HRA) conducted by Yorke Engineering in accordance with SJVAPCD guidance (SJVAPCD 2006, SJVAPCD 2015b, and SJVAPCD 2015c, as cited in Yorke Engineering 2019a). The HRA was conducted using the CARB-approved American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee modeling system (AERMOD) (EPA 2016b) and the Hotspots Analysis and Reporting Program, Version 2 (CARB 2016b). The HRA is based on the level of TAC emissions generated by the project, the location of off-site sensitive receptors, the duration of potential TAC exposure, and local meteorological conditions. Specific model assumptions and inputs for these calculations, including the HRA, can be found in Appendix B.

Impacts related to odors were assessed based on an Odor History Report conducted for the facility by Yorke Engineering (2019b). The report examined the history of odor complaints at the facility and the odor control technologies implemented to address the issue, including the recently installed RTO system, which was designed to mitigate emissions from four production lines and is sized to maximize odor abatement. The full report can be found in Appendix C.

THRESHOLDS OF SIGNIFICANCE

In its March 2015 *Guide for Assessing and Mitigating Air Quality Impacts* (CEQA Guide), SJVAPCD provides evidence to support the development and applicability of its thresholds of significance for project-generated emissions of criteria air pollutants and precursors, which may be used at the discretion of a lead agency overseeing the environmental review of projects located within the SJVAB. As stated in the CEQA Guide, “a Lead Agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the Lead Agency to adopt such thresholds is supported by substantial evidence” (SJVAPCD 2015a:63-64). CEQA-related air quality thresholds of significance are tied to achieving or maintaining attainment designations with respect to the NAAQS and CAAQS for criteria air pollutants, which are scientifically substantiated, numerical concentrations considered to be protective of human health.

SJVAPCD identified numerical thresholds for construction- and operation-related emissions of criteria air pollutants and precursors that would determine whether a project’s discrete emissions would result in a cumulative, regional contribution (i.e., significant) to the baseline nonattainment status of SJVAPCD. In developing thresholds of significance for individual project emissions, SJVAPCD analyzed emissions values against the SJVAPCD’s offset thresholds to ozone precursors, which, when applied, prevent further deterioration of ambient air quality in the SJVAB. Thresholds for PM₁₀ and PM_{2.5} were adapted from the SJVAPCD’s PM₁₀ New Source Review offset thresholds for stationary sources (SJVAPCD 2015a:82). Using these parameters, SJVAPCD developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project’s emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB.

Using federal and State guidance pertaining to TACs, in addition to the findings of several scientific studies, SJVAPCD developed cancer risk and non-cancer health hazard thresholds for TAC exposure. Unlike criteria air pollutants, there is no known safe concentration of TACs in regard to cancer risk. Moreover, TAC emissions contribute to the deterioration of localized air quality and due to the dispersion characteristics of TACs, emissions generally do not cause regional-scale air quality impacts. SJVAPCD’s thresholds are designed to ensure that a source of TACs does not contribute to a localized, significant impact to existing or new receptors.

As such, for the purpose of this project, the following thresholds of significance are used to determine if project-generated emissions would produce a significant localized and/or regional air quality impact such that human health would be adversely affected. Based on Appendix G of the State CEQA Guidelines and SJVAPCD recommendations (SJVAPCD 2015a:80), the project would result in a potentially significant impact to air quality if it would:

- ▶ result in emissions of criteria air pollutants or precursors that would conflict with or obstruct air quality planning efforts, result in a cumulatively considerable net increase of any criteria air pollutant for which the SJVAB has been designated as nonattainment with respect the applicable NAAQS or CAAAQS, or expose sensitive receptors to substantial pollutant concentrations. SJVAPCD considers these criteria to be exceeded if a project’s construction- or operation-related emissions would exceed its annual thresholds of 10 tons per year (tons/year) for ROG or NO_x, 100 tons/year or CO, 27 tons/year for oxides of sulfur (SO_x), and/or 15 tons/year for PM₁₀ or

PM_{2.5} (SJVAPCD 2015a:80). In addition, if emissions of any of these pollutants would exceed a screening criterion of 100 pounds per day (lb/day), SJVAPCD requires site-specific analysis, the AAQA, to determine whether the project would result in a localized exceedance or cumulatively considerable contribution to an exceedance of a NAAQS or CAAQS (SJVAPCD 2015a:93–94); and/or

- ▶ expose sensitive receptors to a substantial incremental increase in TAC emissions that exceed 20 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater (SJVAPCD 2015b:1).

Regarding the threshold of significance for odors, SJVAPCD CEQA Guide (SJVAPCD 2015a) provides guidance to lead agencies for determining potential impacts related to odors. The CEQA Guide includes a screening table for potential odor sources that includes distances between various types of odor-generating facilities and sensitive receptors. The Guide also includes specific complaint-based thresholds for lead agencies to consider when locating new sensitive receptors near an existing odor source. However, because this project does not involve development of a new odor source, but involves expansion of an existing facility, neither of these can be appropriately applied as thresholds of significance to evaluate this project's odor impacts. The CEQA Guide states that any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact (SJVAPCD 2015a:125). This is mostly consistent with the odor question in CEQA Appendix G, which was revised as part of the 2019 update: "result in other emissions (such as those leading to odors) adversely affecting a substantial number of people." However, whereas the SJVAPCD CEQA Guide focuses on frequency of odor exposure, Appendix G focuses on number of people affected. In order to remain consistent with the 2019 CEQA Guidelines update, the threshold of significance used in this analysis is based on CEQA Appendix G:

- ▶ result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Short-Term Emissions of Criteria Air Pollutants and Precursors Associated with Installation of Line 4

Construction activities associated with installation of the project would result in short-term emissions of ROG, NO_x, CO, SO_x, PM₁₀ and PM_{2.5} from haul trucks delivery industrial equipment and worker commute trips. Project-generated construction emissions of criteria air pollutants and precursors would not exceed any SJVAPCD mass emissions thresholds. Consistent with SJVAPCD Regulation VIII (Fugitive PM₁₀ Prohibition), measures would be implemented to reduce construction-related PM₁₀ emissions (predominantly dust and dirt). This impact would be **less than significant**.

As explained in Chapter 2, "Project Description," delivery of the fourth production line components to the project site would require 15 truck trips. Installation activities would require an average of 15 construction workers and one heavy-duty truck per day for the entire 3- to 4-month installation period. Installation would occur inside the building at various locations, depending on the equipment being installed. Installation would not involve earth movement, operation of vehicles or machinery on unpaved surfaces, or other types of ground disturbance.

Emissions of criteria air pollutants and precursors associated with installation of the fourth production line were estimated using the construction module of CalEEMod and are summarized in Table 3.1-6.

Table 3.1-6 Summary of Modeled Emissions of Criteria Air Pollutants and Precursors Associated with Installation of Line 4

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Annual Emissions (tons/year)	0.02	0.12	0.11	0.00	0.04	0.01
SJVAPCD Annual Thresholds (tons/year)	10	10	100	27	15	15
Maximum Daily Emissions (lb/day)	0.3	5.3	1.9	<0.1	0.1	0.2
SJVAPCD Daily Thresholds (lb/day)	100	100	100	100	100	100

Notes: tons/year = tons per year; lb/day = pounds per day; SJVAPCD = San Joaquin Valley Air Pollution Control District; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = oxides of sulfur; PM₁₀ = particulate matter with aerodynamic diameter of 10 micrometers or less; PM_{2.5} = particulate matter with aerodynamic diameter of 2.5 micrometers or less

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

Source: Modeling conducted by Yorke Engineering 2019 (Yorke Engineering 2019a:6).

As shown in Table 3.1-6, emissions of criteria air pollutants and precursors would not exceed SJVAPCD's mass emission thresholds. Therefore, the short-term activities associated with installation of the fourth production line would not conflict with air quality planning efforts in the SJVAB, result in a cumulatively considerable net increase in any criteria air pollutant, or expose sensitive receptors to substantial pollutant concentrations. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.1-2: Operational Emissions of Criteria Air Pollutants and Precursors

Project-related operational emissions of criteria air pollutants and precursors would not exceed the annual mass emission thresholds of significance established by SJVAPCD and operation of the project would not result in concentrations of criteria air pollutants that exceed the applicable NAAQS or CAAQS or result in a cumulatively considerable contribution to existing exceedances of the NAAQS or CAAQS. This impact would be **less than significant**.

The addition of the fourth production line to the Diamond Pet Food facility would result in the operation of new industrial equipment, including a new dryer and hammermill; increased operation of existing equipment used for pet food (raw) material dispensing, grinding, mixing, extrusion, conveying, and packaging; increased use of the existing boilers; increased use of the existing RTO system; increased vehicle trips associated with the additional workers and trucks bringing materials to the facility and hauling finished pet food products away. Some of the existing equipment would not be operated at an increased rate due to the project such as the dryers for the three existing production lines and emergency diesel fire pump. The projected increase in operational emissions is summarized in Table 3.1-7 and detailed calculations are provided in Appendix B. These emission estimates assume that the fourth production line would operate at its full permitted capacity.

Table 3.1-7 Summary of Modeled Emissions of Criteria Air Pollutants and Precursors Associated with Operation of Line 4

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Annual Emissions (tons/year)						
Stationary Sources	0.4	8.7	24.7	0.2	2.9	1.8
Mobile Sources	<0.1	1.2	0.3	<0.1	<0.1	<0.1
Total	0.5	9.9	25.0	0.2	2.9	1.8
SJVAPCD Thresholds	10	10	100	27	15	15
Daily Emissions (lb/day)						
Stationary Sources	2.4	54.1	152.1	1.3	16.2	10.1
Mobile Sources	0.2	6.8	1.5	<0.1	<0.1	<0.1
Total	2.6	60.9	153.6 ¹	1.4	16.3	10.2
SJVAPCD Screening Criteria for Conducting an Ambient Air Quality Analysis	100	100	100	100	100	100

Notes: tons/year = tons per year; lb/day = pounds per day; SJVAPCD = San Joaquin Valley Air Pollution Control District; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = oxides of sulfur; PM₁₀ = particulate matter with aerodynamic diameter of 10 micrometers or less; PM_{2.5} = particulate matter with aerodynamic diameter of 2.5 micrometers or less

¹ Because the SJVAPCD screening criterion for daily emissions of CO is exceeded, a detailed ambient air quality analysis was conducted for all pollutants pursuant to SJVAPCD guidance.

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

Sources: Yorke Engineering 2019a:14–15; Yorke Engineering 2020:4

As shown in Table 3.1-7, operation of the project would not result in increases in annual emissions of any criteria air pollutants or precursors that would exceed SJVAPCD-recommended tons-per-year thresholds of significance. Also shown in Table 3.1-7, operation of the fourth production line could result in an increase in the maximum daily emissions of CO that exceeds SJVAPCD's criterion of 100 lb/day. Because this daily emissions criterion emissions would be exceeded for one of the pollutants, SJVAPCD requires that an AAQA be prepared to examine whether the emissions of any of the criteria air pollutants would result in, or contribute to, an exceedance of the NAAQS and CAAQS for these pollutants at nearby locations (SJVAPCD 2015a:93–94).

An AAQA was conducted for the project by Yorke Engineering and the results are provided in Appendix B. The AAQA involved dispersion modeling using AERMOD (EPA 2016b) and meteorological data provided by SJVAPCD. In accordance with modeling guidance from SJVAPCD, this modeling applied local meteorological data, background concentrations of these pollutants measured at nearby air quality monitoring stations, and the levels of emissions generated by the project. The results of the AAQA indicate that emissions from the project would not result in an exceedance of the NAAQS or CAAQS for NO₂, CO, or SO₂. Because the background concentrations of PM₁₀ and PM_{2.5} already exceed the applicable NAAQS and CAAQS, an additional analysis was conducted to determine whether the incremental increase in concentrations of PM₁₀ and PM_{2.5} would exceed the concentration-based significance thresholds designated by SJVAPCD. These concentration-based thresholds are equivalent to the EPA-designated significant impact levels (SIL), where each SIL is the level at which SJVAPCD considers a project's contribution to be cumulatively considerable for individual air pollutants. This modeling found that the project's contribution to the annual concentration of PM₁₀ would be 0.70 micrograms per cubic meter (µg/m³), which would not exceed the SIL of 1.0 µg/m³; and the project's contribution to the 24-hour concentration of PM₁₀ would be 4.11 µg/m³, which would be less than the SIL of 5.0 µg/m³ (Yorke Engineering 2019a). The PM_{2.5} modeling found the project's maximum contribution to the annual concentration of PM_{2.5} would be 0.150 µg/m³, which would not exceed the SIL of 0.20 µg/m³; and the project's maximum 24-hour concentration of PM_{2.5} would be 0.952 µg/m³, which would be less than the SIL of 1.2 µg/m³ (Yorke Engineering 2020). For these reasons, operational emissions from the project would not conflict with air quality planning efforts in the SJVAB, result in a cumulatively considerable net increase in any criteria

air pollutant, or expose sensitive receptors to substantial pollutant concentrations that could result in adverse health effects. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.1-3: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants

Operation of the project would result in increased emissions of TACs associated with increased operation of the boilers and RTO system and increase in truck activity. However, operation of the project would not result in levels of health risk to off-site receptors that exceed SJVAPCD-established thresholds. Therefore, this impact would be **less than significant**.

During installation of the fourth production line short-term exhaust emissions of diesel PM would be emitted by on-road delivery trucks. No off-road construction equipment would be used. Particulate exhaust emissions from diesel PM was identified as a TAC by CARB in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to guidance from the California Office of Environmental Health and Assessment's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, a 30-year exposure duration is used for estimating cancer risk at residential land uses (OEHHA 2015). Installation of the fourth production line is anticipated to occur over a 3- to 4-month period.

Additionally, given the highly dispersive properties of diesel PM (Zhu et al. 2002), and the temporary and intermittent duration of construction activity, it is not anticipated that project-related installation would expose sensitive receptors to a substantial incremental increase TAC emission-associated health risks that exceed 20 in 1 million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater.

Operation of the project, however, would result in a long-term increase in TACs emitted from the facility. Most of the increase in TAC emissions would be due to the increased operation of the boilers and RTO system to serve the fourth production line. Also, the project-related increase in truck activity would result in an increase in diesel PM emissions. An HRA was conducted by Yorke Engineering in accordance with SJVAPCD guidance to determine the incremental increase in health risk exposure at off-site sensitive receptors (Yorke Engineering 2019a:26–27, 30–31). The HRA is part of the *Line 4 Air Quality Technical Report* that is provided in Appendix B. Dispersion modeling for the HRA was conducted using AERMOD and levels of health risk exposure were estimated using the Hotspots Analysis and Reporting Program, Version 2 (CARB 2016b). Detailed modeling inputs and results are provided in Appendix B. The results of the HRA indicate that, at the point of maximum impact offsite, the project would result in an incremental increase in cancer risk of 0.85 in one million, a hazard index for long-term chronic risk of 0.0004, and a hazard index for acute risk of 0.0007 (Yorke Engineering 2019a:30). The HRA also evaluated the levels of health risk associated with the levels of existing TACs emitted by the facility in combination with the increase in TAC emissions associated with the project. The results of the HRA indicate that, at the point of maximum impact, the combined levels of cancer risk would be 12.40 in one million, a hazard index for long-term chronic risk of 0.0032, and a hazard index for acute risk of 0.0022 (Yorke Engineering 2019a:31). Because these levels of health risk would not exceed SJVAPCD's incremental increase threshold for cancer risk of 20 in one million or its threshold for chronic and acute risk (i.e., a hazard index greater than 1), this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.1-4: Exposure of Sensitive Receptors to Odors

Odorous emissions associated with project construction would be minimal and temporary and construction would not require the use of off-road, heavy-duty diesel equipment. Operation of the project would involve the continued use of RTOs as an odor-reducing technology. Potential odor-producing compounds from pet food production are expected to be in the form of volatile organic compound (VOC) emissions. Based on the results of source testing at the facility, the RTOs reduce all VOC emissions from the production lines by 99.8 percent. Also, installation of the RTO system has reduced the number of odor complaints received about the facility and the existing RTO system was designed to treat the exhaust of four production lines. Further, the project includes an Odor Management Plan (OMP) that includes a variety of odor abatement best practices and includes an odor tracking and response program. The response program includes three tiers of progressively rigorous actions ranging from systems checks to reduction in production up to 25 percent (if deemed necessary by the City). This would substantially reduce the potential impacts related to odors. However, with changes in technology and in agency procedures and contacts, it is possible that the OMP could become outdated, which could diminish its effectiveness. Therefore, without periodic updates to the OMP, the impact could be **potentially significant**.

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to distress and often generating citizen complaints to local governments and regulatory agencies.

Because installation of the fourth production line would involve minimal construction equipment and no off-road heavy-duty diesel equipment, odors associated with project construction would be minimal and temporary. This analysis focuses on operational odorous emissions associated with project implementation.

As discussed in Chapter 2, "Project Description," the Diamond Pet Food facility began operating a new RTO system in December 2018. The RTO system has the capacity to treat all of the air emitted from four production lines. The Odor History Report (included as Appendix B) prepared by Yorke Engineering examines the history of odor issues at the facility and the odor technologies implemented over time to address the issues, including the RTO equipment. An RTO system was identified as the best choice with the highest expected level of odor abatement. This determination is partly based on the experience reported by the Mojave Desert Air Quality Management District (MDAQMD) in controlling odors from a pet food manufacturing facility in Victorville, California. According to a draft study summary provided by the MDAQMD for the 20-month period from April 2006 through November 2007, there were over 4,100 odor complaints ranging from a monthly low of 10 (April 2006) to a monthly high of 620 (May 2007). After the installation of the RTO system, the complaints dropped to approximately one per month, and the MDAQMD considers the RTO to be a success. (Yorke Engineering 2019b:3).

Potential odorous compounds emitted during pet food production are expected to be in the form of VOC emissions. As discussed above under "Odor Complaint History," based on the results of the source testing, the RTOs reduce VOC emissions from the production lines by 99.8 percent (Yorke Engineering 2019b:5). This exceeds the 95-percent efficiency standard established by SJVAPCD in its permit.

The existing RTO system was designed to abate emissions from four production lines and is sized to exceed the level of odor abatement required in the permit issued by SJVAPCD. The design includes an automatic monitoring system that regulates the flow of natural gas to maintain the optimal temperature in the combustion chamber. One hundred percent of the exhaust that enters the chamber is abated. A relatively small percentage of incoming exhaust leaks at the rotary heat recovery valve instead of entering the combustion chamber. Under existing conditions, it is estimated that 0.2 percent of the exhaust leaks out of the rotary heat recovery valve. As discussed under "Odor Complaint History" above, since the RTO system began the stable operating period at the Ripon facility from late December 2018 through October 2019, there have been two confirmed complaints (an average 0.2 confirmed complaints per month from January through October 2019).

With the addition of a fourth production line, incrementally more exhaust will be generated than under existing conditions and there is a possibility that some additional unabated gas could bypass the combustion chamber and result in an increase in the amount of unabated gas leaking at the rotary heat recovery valve; the level of increase is estimated to be less than 0.1 percent (Frazier, pers. comm. 2019). This estimate is within the margin of error of the statistical methods used to model and measure leakage. Because only one confirmed odor complaint has occurred since installation of the RTO system, because the RTO system is designed to appropriately handle four production lines, and because the incremental increase in exhaust is expected to result in less than 0.1 percent release of unabated gas, it is not expected that the project would result in odorous emissions that adversely affect a substantial number of people.

Also, as described in Chapter 2, "Project Description," DPF-Ripon has included a detailed OMP, prepared by Yorke Engineering (a qualified odor management specialist), in close coordination with Ascent Environmental staff, City of Ripon staff, and Diamond Pet Foods staff, to further minimize potential for substantial exposure of sensitive receptors to odors as a result of the proposed fourth production line. The proposed OMP is included as Appendix D of this Draft EIR. The OMP details the odor-emitting activities associated with the facility and odor control practices and also includes a detailed odor complaint tracking and response system. The proposed odor complaint tracking system involves recording all complaints received by either SJVAPCD (the recommended complaint recipient), the City, and/or DPR-Ripon, and sharing each complaint with the other two organizations. This information sharing promotes more consistent odor complaint verification and thorough record-keeping. The odor complaint response system involves three tiers of response, each successive tier more comprehensive than the previous. The Tier 1 Odor Response is triggered with any odor complaint that is confirmed to be associated with pet food. Tier 1 involves systems checks, review of RTO parameters, and implementing an automated maintenance sequence.

The Tier 2 Odor Response is triggered if an additional verified odor complaint is received within a timeframe that could suggest the odor issue associated with the first complaint remains unresolved. (The City would determine, based on all of the complaint and previous response information, whether the additional odor complaint was received within a timeframe that would suggest an odor issue remains.) Tier 2 involves repeating the Tier 1 steps, examining all exhaust lines for leaks, conducting automated maintenance sequence and point of inspection on all RTO units, making any needed adjustments to RTO combustion temperature, reviewing all inlet and outlet exhaust temperatures, and coordination with the RTO manufacturer for further recommendations.

The Tier 3 Odor Response is triggered if an additional verified odor complaint is received that suggests the same odor issue remains unresolved. Tier 3 involves the DPF-Ripon operator coordinating with the City and SJVAPCD to determine appropriate additional measures, which include (but are not limited to) a full diagnostic of the RTO by the manufacturer and implementation of any maintenance requirements and/or upgrades/expansions to the odor abatement system. Tier 3 also includes a provision that the City may require a reduction in the production of pet food up to 25 percent (equivalent to one line of production). Implementing this provision would eliminate the equivalent production associated with the proposed fourth line and would therefore eliminate potential increases in odors associated with the proposed project. With implementation of Tier 3 of the OMP, the project would not result in emission of odors that would affect a substantial number of people.

However, over the long term, as technology changes, and as City and SJVAPCD procedures and contact information change, the need for updates to the OMP may occur. Without periodic updates to the OMP, it is possible that a **significant** impact could result.

Mitigation Measures

Mitigation Measure 3.1-4: Update the Odor Management Plan

Every five years, the City will meet with DPF-Ripon and SJVAPCD to review the information in the odor management plan (OMP), as well as the overall effectiveness of the OMP, and will identify any necessary updates or other changes. Changes shall only be made if they enhance the effectiveness of the OMP for odor minimization or increase the accuracy of the information.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-4 would further minimize the potential for increased odor exposure associated with the proposed increase in production by requiring the OMP to be updated every 5 years. Keeping the OMP updated reduces the potential for changes in technology or in agency procedures/contacts to diminish the effectiveness of the OMP; therefore, with mitigation, the impact would be **less than significant**.

3.2 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of project-generated GHG emissions and discussion about their contribution to global climate change.

3.2.1 Regulatory Setting

FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.*, 549 U.S. 497 (2007), the Supreme Court of the United States ruled that carbon dioxide (CO₂) is an air pollutant under the federal Clean Air Act and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions.

In 2010, EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, discussed below.

In 2015, EPA unveiled the Clean Power Plan. The purpose of the plan was to reduce CO₂ emissions from electrical power generation by 32 percent relative to 2005 levels within 25 years. EPA is proposing to repeal the Clean Power Plan because of a change to the legal interpretation of Section 111(d) of the federal Clean Air Act, on which the Clean Power Plan was based. The comment period on the proposed repeal closed on April 26, 2018. A final ruling by EPA has not yet been issued.

In October 2012, EPA and the National Highway Traffic Safety Administration, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). These rules would increase the fuel economy to 54.5 miles per gallon, limiting vehicle emissions for 163 grams of CO₂ per mile for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630). However, on April 2, 2018, the EPA administrator announced a final determination that the current standards are not appropriate and should be revised. It is not yet known what revisions will be adopted or when they will be implemented (EPA 2018).

Greenhouse Gas Permitting Requirements

EPA's New Source Review permitting program, including its Prevention of Significant Deterioration (PSD) requirements, applies to new major sources of criteria air pollutants and precursors. Title V of the federal Clean Air Act requires "major sources" of air pollutants to obtain and operate in compliance with an operating permit (EPA 2017a). Operating permits are legally-enforceable documents designed to improve compliance by clarifying what sources must do to control air pollution. A source is considered a major source if it would emit emissions of criteria air pollutants (or precursors) or hazardous air pollutants that exceed certain mass emission level criteria (e.g., 100 tons per year) depending on the ambient air quality conditions where the source is located. The PSD program is designed to make sure that a source's emissions would not cause or contribute to any applicable National Ambient Air Quality Standard. National Ambient Air Quality Standards are explained in more detail in Section 3.1, "Air Quality."

In 2010, EPA issued the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (EPA 2011). This rule set mass emission-based permitting criteria specifically for carbon dioxide-equivalent (CO₂e) emissions that define when permits under the New Source Review PSD and Title V Operating Permit programs are required for new and existing industrial facilities. This is known as Steps 1 and 2 of the Tailoring Rule for PSD and Title V permitting based on CO₂e emissions.

A new part of the GHG Tailoring Rule, known as Step 3, was issued by EPA in 2012. Step 3 revised the regulations to require a source that emits or has the potential to emit levels of CO₂e that exceed established mass emission criteria (i.e., 100,000 tons per year [90,718 metric tons (MT) per year]) of CO₂e, but that has minor source emissions of all other regulated pollutants, to apply for an operating permit. However, in 2014, the U.S. Supreme Court issued its

decision in *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014). The Court held that EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other, non-GHG pollutants) may continue to require limitations on GHG emissions. In response to the Supreme Court decision and the D.C. Circuit's amended judgment, EPA is undertaking various actions to explain the next steps in GHG permitting (EPA 2017b). This program is also currently under review by EPA, but at the time of publication of this Draft EIR had not been changed.

STATE

Statewide GHG Emission Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades (State of California 2018). GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board (CARB), outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017a:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other state agencies have released the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* in January 2019, which addresses the carbon flux from natural and working lands, including the ever-dynamic changes in both GHG emissions and carbon sequestration associated with the management of these lands (CalEPA 2019).

Cap-and-Trade Program

CARB administers the state's cap-and-trade program, which covers GHG emission sources that emit more than 25,000 metric tons of carbon dioxide equivalent per year (MTCO₂e/year), such as refineries, power plants, and industrial facilities. This market-based approach to reducing GHG emissions provides economic incentives for achieving GHG emission reductions. The overall GHG emissions cap under the program declines by 3 percent each year from 2015 through 2020, and amendments to increase the stringency of the cap and extend the program beyond 2020 were approved by CARB in late 2018 (Center for Climate and Energy Solutions 2019). The intent of the program is to incentivize stationary sources, such as electricity generation and industrial plants, that emit consistently high levels of GHG emissions, to implement technologies and pay for allowances that fund other GHG-reducing state programs (CARB 2012). Industries may purchase allowances at statewide auctions. Over time, the number of allowances decreases while pricing per allowance simultaneously increases. The latest auction, which took place in May 2019, valued 1 MTCO₂e at \$17.45 and generated more than \$1.3 billion in revenue (CARB 2019) that will be directed towards other statewide programs to reduce GHG emissions.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018c). By 2025, when the rules will be fully implemented, GHG emissions from the

statewide fleet of new cars and light-duty trucks will be reduced by 34 percent and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016:1).

Executive Order B-48-18, signed into law in January 2018, requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen fueling stations and 250,000 electric vehicle-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity of California's transportation fuels. The LCFS applies to fuels used by on-road motor vehicle and by off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

In addition to regulations that address tailpipe emissions and transportation fuels, the state legislature has passed regulations to address the amount of driving by on-road vehicles. Since the passage of Senate Bill (SB) 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to adopt plans showing reduction in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035 (CARB 2018a). These plans link land use and housing allocation to transportation planning and related mobile-source emissions. The San Joaquin Council of Governments (SJCOG), which serves as the MPO for San Joaquin County, adopted its latest Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) in 2018 (SJCOG 2018). SACOG was tasked by CARB to achieve a 12 percent per capita reduction compared to 2012 emissions by 2020 and a 16 percent per capita reduction by 2035 (CARB 2018a).

Under SB 743 of 2013, the Governor's Office of Planning and Research (OPR) proposed changes to the State CEQA Guidelines, including the addition of Section 15064.3, which would require that CEQA transportation analysis move away from focusing on vehicle delay and level of service (LOS) (OPR 2017a:77–90). The amended State CEQA Guidelines are effective as of December 28, 2018. In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommends that the transportation impact of a project be based on whether the project would generate a level of VMT per capita (or VMT per employee or some other metric) that is 15 percent lower than that of existing development in the region (OPR 2017b:12–13), or that a different threshold is used based on substantial evidence. OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions" (OPR 2017b:18). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts.

Legislation Associated with Electricity Generation

The state has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018).

LOCAL

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the primary agency responsible for addressing air quality concerns in all of San Joaquin County—its role is discussed further in Section 3.1, "Air Quality." SJVAPCD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development project. SJVAPCD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SJVAPCD's goals in developing GHG thresholds include ease of implementation; use of standard analysis tools; and emissions mitigation consistent with AB 32. However, since the passage of SB 32, which mandates a statewide emissions target of 40 percent below 1990 levels by 2030, SJVAPCD has not developed new thresholds in compliance with this target.

City of Ripon

The City of Ripon has not adopted a Climate Action Plan or other type of community-wide GHG reduction plan, policy, or ordinance.

3.2.2 Environmental Setting

THE PHYSICAL SCIENTIFIC BASIS OF GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (IPCC 2014:5).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013:467).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSION SOURCES

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2016 was 429 million metric tons of carbon dioxide equivalent (MMTCO₂e) (CARB 2018b). This is less than the 2020 target of 431 MMTCO₂e (CARB 2018b:1). Table 3.2-1 summarizes the statewide GHG inventory for California.

Table 3.2-1 Statewide GHG Emissions by Economic Sector

Sector	Percent
Transportation	41
Industrial	23
Electricity generation (in state)	10
Electricity generation (imports)	6
Agriculture	8
Residential	7
Commercial	5
Not specified	<1

Source: CARB 2018b

As shown in Table 3.2-1, transportation, industry, and electricity generation are the largest GHG emission sectors. Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to the Intergovernmental Panel on Climate Change, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 1.5 degrees Celsius (2.7 degrees Fahrenheit [°F]) by 2040 (IPCC 2018). According to *California's Fourth Climate Change Assessment*, with GHGs reduced at a moderate rate, then California will experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4 °F from 2040 to 2069, and by 5.6 °F from 2070 to 2100; and if GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historic average by 2.7 °F from 2006 to 2039, by 5.8 °F from 2040 to 2069, and by 8.8 °F from 2070 to 2100 (OPR, CEC, and CNRA 2018:5).

Since its previous climate change assessment in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012–2016, an almost non-existent Sierra Nevada winter snowpack in 2014–2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR, CEC, and CNRA 2018:3). According to CNRA's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018:55). In contrast, the northern Sierra Nevada experienced its wettest year on record during the 2016–2017 water year (CNRA 2018:64). The changes in precipitation exacerbate wildfires throughout California, increasing their frequency, size, and devastation. As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018:190–192). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR, CEC, and CNRA 2018:6). Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018:64, 116–117, 127; OPR, CEC, and CNRA 2018:7–14).

Cal-Adapt is a climate change scenario planning tool developed by CEC that downscales global climate model data to local and regional resolution under two emissions scenarios. The Representative Concentration Pathway (RCP) 8.5 scenario represents a business-as-usual future emissions scenario, and the RCP 4.5 scenario represents a future with reduced GHG emissions. According to Cal-Adapt, annual average temperatures in the City of Ripon are projected to rise between 5.5°F and 8.4°F by 2099, with the low and high ends of the range reflecting the lower and higher emissions increase scenarios (CEC 2018a).

San Joaquin County experienced an annual average high temperature of 73.6°F between 1961 and 1990. Under the RCP 4.5 scenario, the county's annual average high temperature is projected to increase by 4.2°F to 77.8°F by 2050 and increase an additional 1.3°F to 79.1°F by 2099 (CEC 2018b). Under the RCP 8.5 scenario, the county's annual average high temperature is projected to increase by 5.2°F to 78.8°F by 2050 and increase an additional 3.3°F to 82.1°F by 2099 (CEC 2018b).

San Joaquin County experienced an average precipitation of 13.8 inches per year between 1961 and 1990. Under the RCP 4.5 scenario, the county is projected to experience an increase of 1.6 inches to 15.4 inches per year by 2050 and decrease slightly to 15.3 inches per year by 2099 (CEC 2018c). Under the RCP 8.5 scenario, the county is projected to experience an increase of 1.5 inches to 15.4 inches per year by 2050 and increase by 1.4 inches to 16.8 inches per year by 2099 (CEC 2018c).

Environmental Impacts and Mitigation Measures

METHODOLOGY

GHG emissions associated with the proposed project would be generated during project construction and by operation of Production Line 4 after it is built. Estimated levels of construction- and operation-related GHGs are presented below. The project is evaluated for its consistency with adopted regulations, plans, and policies aimed at reducing GHG emissions. These include the CARB's 2017 Scoping Plan, the Cap-and-Trade Program, SJCOG's *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), and applicable guidance from SJVAPCD. The levels of emissions associated with project construction and operation were estimated in the *Line 4 Air Quality Technical Report* prepared by Yorke Engineering (2019), which is included in Appendix B.

Construction-Related Greenhouse Gas Emissions

Short-term construction-generated GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2016), as recommended by SJVAPCD and other air districts in California. Modeling was based on project-specific information (e.g., number of construction workers, number of haul truck trips, schedule) where available; and default values in CalEEMod that are based on the project's location and land use type. Construction of the project would take approximately 10 months.

Operational Greenhouse Gas Emissions

Emissions generated by the equipment used to operate Line 4 were estimated based on data collected for production Lines 1–3, including their levels of electricity and natural gas consumption, which have been operating for multiple years. However, it was conservatively assumed that equipment on production Line 4 would operate at full capacity even though this has not historically been the case for equipment on Lines 1–3. Indirect emissions associated with electricity consumption were estimated using GHG emissions factors for the Modesto Irrigation District (MID). Mobile-source emissions generated by new worker commute trips and haul truck trips associated with operation of Line 4 were estimated using emission factors from the Emission Factor 2014 model (EMFAC2017, Version 1.0.2) (CARB 2017b). Detailed model assumptions and inputs for these calculations can be found in Appendix B.

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact on climate change is addressed only as a cumulative impact.

State CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Under Appendix G of the State CEQA Guidelines, implementing a project would result in a cumulatively considerable contribution to climate change if it would:

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

SJVAPCD policy provides for a tiered approach in assessing significance of project-specific GHG emission increases, as shown below.

- ▶ Project complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA-compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement best performance standards (BPS).
- ▶ Projects implementing BPS would not require quantification of project-specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.
- ▶ Projects not implementing BPS would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, as compared to business-as-usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in the 2017 Scoping Plan. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHGs.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Generation of Greenhouse Gas Emissions

Installation of the fourth production line would result in GHG emissions from construction activities from worker commute trips, materials delivery, and the use of equipment that would result in a total of 61 MTCO₂e. Operation of the fourth production line would result in increases in energy consumption and vehicle trips that would generate approximately 13,150 MTCO₂e/year. GHG emissions associated with the fourth production line would be additional to the GHGs emitted by the existing three production lines, resulting in the facility generating 46,741 MTCO₂e/year. Mobile-source emissions would be consistent with SJCOG's RTP/SCS, and emissions associated with electricity consumption would reduce over time due to Renewables Portfolio Standard (RPS) requirements. The addition of the fourth production line would result in the facility exceeding the emissions limit of 25,000 MTCO₂e/year, and the Diamond Pet Foods facility would become a covered entity required to reduce GHG emissions in accordance with all requirements of the Cap-and-Trade Program administered by CARB. For these reasons, the project would be consistent with applicable plans and policies adopted for the purposes of reducing GHG emissions and the increase in GHG emissions associated with the project would not be a cumulatively considerable contribution to climate change. This impact would be **less than significant**.

As explained in Chapter 2, “Project Description,” delivery of the fourth production line components to the project site would require 15 truck trips. Installation activities would require an average of 15 construction workers per day and one heavy-duty truck per day for the entire 3- to 4-month installation period. Installation would occur inside the existing building and no new excavation or earth disturbance would take place.

Construction-generated GHG emissions associated with the installation of the fourth production line were estimated using the construction module of CalEEMod. These modeling results are provided in a report by Yorke Engineering titled *Line 4 Air Quality Technical Report* (Yorke Engineering 2019) and provided in Appendix B. Based on its modeling it was estimated that construction activities associated with the installation of the fourth production line would generate approximately 61 MTCO₂e. This level of one-time GHG emissions is considered nominal relative to the 1,100-MTCO₂e/year threshold recommended by many air districts in California for stationary sources, including the Bay Area Air Quality Management District and the Sacramento Metropolitan Air Quality Management District. SJVAPCD has not adopted a GHG threshold for construction activity or for stationary sources.

The addition of the fourth production line to the Diamond Pet Food facility would result in the operation of new industrial equipment, including a new dryer and hammermill; increased operation of existing equipment used for pet food material dispensing, pre-grinding, grinding, mixing, extrusion, conveying, and packaging; increased use of existing boilers; increased use of the existing Regenerative Thermal Oxidizer (RTO) system; increased vehicle trips associated with the additional workers and trucks bringing input materials to the facility and hauling finished products away from the facility. The projected increased in operational GHG emissions is presented in Table 3.2-2 below, as well as the operational GHG emissions associated with the existing Production Lines 1–3.

Detailed calculations for both construction and operation of the fourth production line can be found in Appendix B.

Table 3.2-2 Summary of Operational Greenhouse Gas Emissions Associated with Existing and Proposed Production Lines

Source	GHG Emissions (MTCO ₂ e/year)		
	Production Lines 1–3 (Existing)	Production Line 4 (Project)	Total
Stationary Sources	23,465	10,909	34,374
Mobile Sources	1,820	418	1,446
Wastewater Generation	1	0.4	1.4
Electricity Consumption	9,100	1,820	10,920
Total Operational Emissions	33,594	13,147	46,741

Notes: GHG = greenhouse gas; MTCO₂e = metric tons of carbon dioxide equivalent per year.

See Appendix B for detailed model inputs, assumptions, and project-specific modeling parameters.

Source: Yorke Engineering 2019:6

Regarding mobile-source emissions, the project would be consistent with the existing land use designations and zoning and all applicable policies of the *City of Ripon General Plan* (2006) (City of Ripon 2018:1-28). The City's General Plan and zoning designations were in place at the time the San Joaquin Council of Governments developed its 2018 RTP/SCS (SJCOG 2018). Therefore, the additional vehicle trips associated with the project—22 daily truck trips and 8 daily passenger vehicle trips—would be consistent with SJCOG's 2018 RTP/SCS.

Electricity consumption would result in indirect GHG emissions associated with the utility provider's carbon intensity for its sources of electricity. MID is the electricity provider for the facility and is subject to the RPS, which requires increasing use of renewables to produce electricity. As of 2017, Modesto Irrigation District derived 29 percent of electricity from renewable sources (CEC 2018d) and is required to increase to 60 percent by 2030 and 100 percent by 2045.

GHG emissions associated with stationary sources would total 34,374 MTCO₂e/year with the addition of the fourth production line. Because this total would exceed the criterion of 25,000 MTCO₂e/year the facility would become subject to the requirements of the Cap-and-Trade program. The Cap-and-Trade Program only addresses the stationary sources for the emissions and excludes mobile-source emissions. Because the facility would be a covered

entity under the state's Cap-and-Trade program with implementation of the project, the entire facility would be subject to the emissions limit and reduction targets mandated by the program, which is a key element of the 2017 Scoping Plan. Over time, the facility would be required to reduce its GHG emissions pursuant to these requirements so as not conflict with the state's ability to meet its 2030 target.

As mentioned above in "Thresholds of Significance," SJVAPCD established BPS for many types of industrial equipment, the installation of which can result in a less-than-significant impact determination. However, SJVAPCD has not established BPSs for the types of equipment that would be part of the fourth production line and/or is already part of the existing three production lines (Mitchell, pers. comm., 2019).

Because the project would result in minimal GHG emissions associated with construction and would be consistent with applicable plans and policies including the RTP/SCS, RPS, and the Cap-and-Trade Program, the project's GHG emissions would not be a cumulatively considerable contribution to climate change. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.3 ENERGY

This section evaluates energy-related impacts of the Diamond Pet Foods project. The analysis considers whether the project would result in inefficient, wasteful, or unnecessary consumption of energy or if it would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Energy related to the project would include electricity directly consumed for operation of production line equipment, use of natural gas, and the consumption of automotive fuels to power passenger vehicles used in worker commute trips and trucks hauling raw materials to the facility and finished products from the facility. Energy would also be consumed by equipment and vehicles used during project construction.

3.3.1 Regulatory Setting

Federal and state agencies regulate energy consumption through various policies, standards, and programs. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [EPA] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 20 of the California Code of Regulations sets forth energy standards for appliances and equipment. Further, the state provides rebates/tax credits for installation of renewable energy systems and offers the Flex Your Power program which promotes conservation in multiple areas.

FEDERAL

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance.

STATE

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The act was created in response to the state legislature's review of studies that projected an increase in statewide energy demand, which could result in the development of power plants in environmentally sensitive areas. In the recitals contained in the act, the legislature stated that it "finds and declares that the present rapid rate of growth in demand for electric energy is in part due to wasteful, uneconomic, inefficient, and unnecessary uses of power and a continuation of this trend will result in serious depletion or irreversible commitment of energy, land and water resources, and potential threats to the state's environmental quality" (Public Resources Code [PRC] Section 25002). To address these concerns, the act authorized the CEC to serve as a power plant siting authority and to develop regulations to reduce energy consumption in residential and commercial buildings. Regulations focused on energy consumption led to the establishment of the Commission's Appliance Efficiency Program, codified under California Code of Regulations (CCR) Title 20, which applies to industrial and residential appliances, including gas- and oil-fired boilers. Regulations also include the Building Energy Efficiency

Standards (California Energy Code) codified under CCR Title 24, Part 6. The act additionally directed CEC to cooperate with the Office of Planning and Research, the California Natural Resources Agency, and other interested parties in developing procedures to ensure that measures intended to minimize wasteful, inefficient, and unnecessary consumption of energy are included in all environmental impact reports required pursuant to CEQA.

California Renewables Portfolio Standard Program

Senate Bill 1078 (Chapter 516, Statutes of 2002) established a renewables portfolio standard (RPS), requiring renewable energy to be included in the mix of energy sources that private utilities use to supply electricity. Senate Bill 100 was enacted on September 10, 2018, modifying the RPS to require that electrical utilities supply 44 percent of retail sales from renewable resources by December 31, 2024, 50 percent by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. The law requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. In 2017 the Modesto Irrigation District (MID), the utility from which the Diamond Pet Foods facility purchases its power, obtained 20 percent of its supplied electricity from renewable energy sources (CEC 2018).

Assembly Bill 1007: State Alternative Fuels Plan

Assembly Bill (AB) 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board (CARB) and in consultation with other state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

Climate Change Scoping Plan

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 (i.e., 40 percent below 1990 levels) and "substantially advance toward our 2050 climate goals" (i.e., 80 percent below 1990 levels) (CARB 2017:1, 3, 5, 20, 25–26). The 2017 Scoping Plan identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). Many of the regulations contained in the 2017 Scoping Plan such as the Advanced Clean Cars, Low Carbon Fuel Standard, and Renewable Portfolio Standard will reduce GHGs while simultaneously making the state as a whole more energy efficient.

More details about the statewide GHG reduction goals and 2017 Scoping Plan measures are provided in the regulatory setting of Section 3.2, "Greenhouse Gas Emissions and Climate Change."

LOCAL

The City of Ripon does not have energy policies applicable to the project.

3.3.2 Environmental Setting

PHYSICAL SETTING

Energy Facilities and Services in the Project Area

Electricity is provided to the Diamond Pet Foods facility by the MID and natural gas is provided by the Pacific Gas and Electric Company. MID operates an electrical generation station directly across South Stockton Avenue from the project site.

Energy Types and Sources

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2014, approximately 35 percent of natural gas consumed in the state was used to generate electricity.

Power plants in California meet approximately 68 percent of the in-state electricity demand, hydroelectric power from the Pacific Northwest provides another 12 percent, and power plants in the southwestern U.S. provide another 20 percent (EIA 2014). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. MID supplies electricity to the facility. In 2017, MID received 20 percent of its power from renewable sources (e.g. biomass, geothermal, hydroelectric, solar, and wind), 16 percent from coal, 16 percent from large hydroelectric, 23 percent from natural gas, and 25 percent from unspecified sources (CEC 2018). MID did not meet the 2017 interim target of 27 percent retail sales from RPS-eligible sources; however, the utility is soliciting proposals for renewable energy resources to comply with the RPS and SB 100 goals described in Section 3.3.1.

ENERGY USE FOR TRANSPORTATION

On-road vehicles use about 90 percent of the petroleum consumed in California. In 2008, the California Department of Transportation (Caltrans) projected 495 million gallons of gasoline and diesel were to be consumed in San Joaquin County in 2015, an increase of approximately 55 million gallons of fuel from 2010 levels (Caltrans 2008).

3.3.3 Impacts and Mitigation Measures

METHODOLOGY

Levels of construction- and operation-related energy consumption by the project include electricity consumption measured in megawatt hours (MWh), natural gas consumption measured in million British Thermal Units (MMBtu), and consumption of gasoline and diesel fuel, which is measured in gallons.

Energy consumption estimates for vehicle fuel use were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer software (California Air Pollution Control Officers Association 2016). Where project-specific information was not known, CalEEMod default values based on the project's location were used. The consumption of electricity and natural gas associated with operation of Line 4 was estimated by maximizing the baseline energy use of production Lines 1, 2, and 3 with an additional line with the same production efficiency and operational parameters.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate project impacts on energy under CEQA are based on applicable questions in Appendix G of the State CEQA Guidelines. Implementing the project would have a significant impact related to energy if it would:

- ▶ result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy during project construction or operation; or
- ▶ conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Result in Wasteful, Inefficient, and Unnecessary Consumption of Energy During Project Construction or Operation

The project would result in the increased consumption of electricity and natural gas at the project site, as well as an increase in automotive fuels associated with worker commute trips and haul trucks. However, the project would meet energy efficiency and advanced technology standards required by CCR Title 20. For these reasons, the project would not result in wasteful, inefficient, or unnecessary consumption of energy. This impact would be **less than significant**.

Because the construction of Line 4 would occur inside the existing building, there would be no ground disturbance, new building construction, or off-road construction equipment used. Construction-related energy consumption would only be associated with the worker vehicles and heavy-duty vendor trucks traveling to and from the project area. Construction worker and truck trips are estimated to consume approximately 4,345 gallons of diesel fuel and 2,663 gallons of gasoline fuel during the 10-month construction phase. The energy needs for project construction would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity or other forms of energy. Worker trips and vendor truck trips would be typical for the installation of an anticipated production line, thus there are no atypical construction-related energy demands associated with the project.

The addition of Production Line 4 to the facility would result in an increased consumption of electricity and natural gas. Electricity would be consumed by equipment on the production line. The existing Regenerative Thermal Oxidizers (RTOs) would consume more natural gas than they currently do for Lines 1, 2, and 3 to treat odorous gasses from being emitted by production Line 4. The addition of Line 4 would also result in an increase in the amount of vehicle travel to the facility and associated consumption of gasoline and diesel fuel. There would be more travel by passenger vehicles associated with commutes by the additional employees that would work on Line 4. There would also be more trucks hauling raw materials to the facility and hauling finished pet food products away from the facility. It is estimated that operation of Line 4 would result in the annual consumption of 4,802 MWh of electricity and 162,982 MMBtu of natural gas by new production equipment, 3,172 gallons of gasoline associated with worker commute trips, and 25,871 gallons of diesel fuel associated with project-related truck trips. See Appendix B for the *Line 4 Air Quality Technical Report* prepared for the project, which also includes the calculation of these estimates (Yorke Engineering 2019). The projected levels of natural gas and electricity consumption associated with operation of Line 4 are conservative because they are based on the maximum incremental change in plant operations from the existing production Lines 1 to 3 even though operations are not expected to operate at maximum capacity. Production Line 4 is anticipated to operate at a percent of nameplate or permit capacity, similar to the existing operation of Lines 1, 2, and 3. The estimate of the increase in natural gas consumed by the Line 4 RTOs is also conservative because it is based on a 25-percent usage rate for all four production lines under the maximum permitted RTO and boiler capacity.

With the addition of Production Line 4, the facility is anticipated to become nominally more energy efficient. The new equipment that would be part of Line 4 would comply with energy efficiency requirements of CCR Title 20. Energy efficiency would improve with the installation of Line 4 as no additional preheating of natural gas-fueled RTOs is needed from the existing Lines 1 to 3. In addition, no new rail trips would take place with the addition of Line 4. Moreover, no new buildings would need to be constructed for the project. For these reasons, the project would not result in the wasteful, inefficient, or unnecessary consumption of energy. Lastly, there are no local or state plans for renewable energy or energy efficiency that are directly applicable to the project. For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

4 CUMULATIVE IMPACTS

4.1 CEQA REQUIREMENTS

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable, as defined in CEQA Guidelines Section 15065(a)(3), means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

4.2 CUMULATIVE IMPACT APPROACH

CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This cumulative analysis uses a combination of the "list" approach and the "projections" approach to identify the cumulative setting. The effects of past and present projects on the environment are reflected by the existing conditions in the project area.

In the case of the proposed Diamond Pet Foods Project, the project site and surrounding area have been modified from its natural conditions by human activity, with initial development of the area for industrial purposes in the 1960s when the Simpson Paper Company developed a paper mill plant at the site. After acquiring what had been Neenah Paper's former fine paper mill in 2010, Diamond remodeled the facility to accommodate a pet foods processing facility with a maximum of four production lines. Diamond started producing pet food at the facility in 2012. The surrounding area (generally between SR 99 and S. Stockton Avenue) is zoned for heavy industrial uses, with businesses including Wever Trucking, Cal Crush, Nulaid Foods, Apple Freight, California Freight, NuCal Foods, Ripon Manufacturing, David Hall Masonry, Silverado Building Materials, Ripon Milling, Labelle Associates, Jackrabbit Equipment, Better Built Truss, Burkett's Pool Plastering, Entekra, and Guntert Steel. The area adjacent to the Stanislaus River is undeveloped.

A list of probable future projects is provided below. Probable future projects are those in the project vicinity that have the possibility of interacting with the project to generate a cumulative impact and either:

1. are partially occupied or under construction;
2. have received final discretionary approvals;
3. have applications accepted as complete by local agencies and are currently undergoing environmental review, or
4. have been discussed publicly by an applicant or otherwise have become known to the lead agency, provided sufficient information is available about the project to allow at least a general analysis of environmental impacts and an evaluation of the likelihood of implementation.

The analysis also considers planning efforts that address regional environmental issues, such as water quality improvement programs, and potential effects associated with climate change. These plans, programs, and effects are discussed in relevant resource discussions below.

4.2.1 Geographic Scope

The geographic area that could be affected by implementation of the proposed Diamond Pet Foods Project varies depending on the type of environmental resource being considered. When the effects of the project are considered in combination with those other past, present, and probable future projects to identify cumulative impacts, the other projects that are considered may also vary depending on the type of environmental effects being assessed. Table 4-1 presents the general geographic areas associated with the different resources addressed in this analysis.

Table 4-1 Geographic Scope of Cumulative Impacts

Resource Topic	Geographic Area
Air Quality	Regional (pollutant emissions that affect the air basins) and immediate project vicinity (pollutant emissions that are highly localized)
Greenhouse Gas Emissions and Climate Change	Global
Energy	Local utility service area
Transportation and Traffic	Regional and local roadways where the project could contribute traffic (traffic study area)
Source: Compiled by Ascent Environmental in 2019	

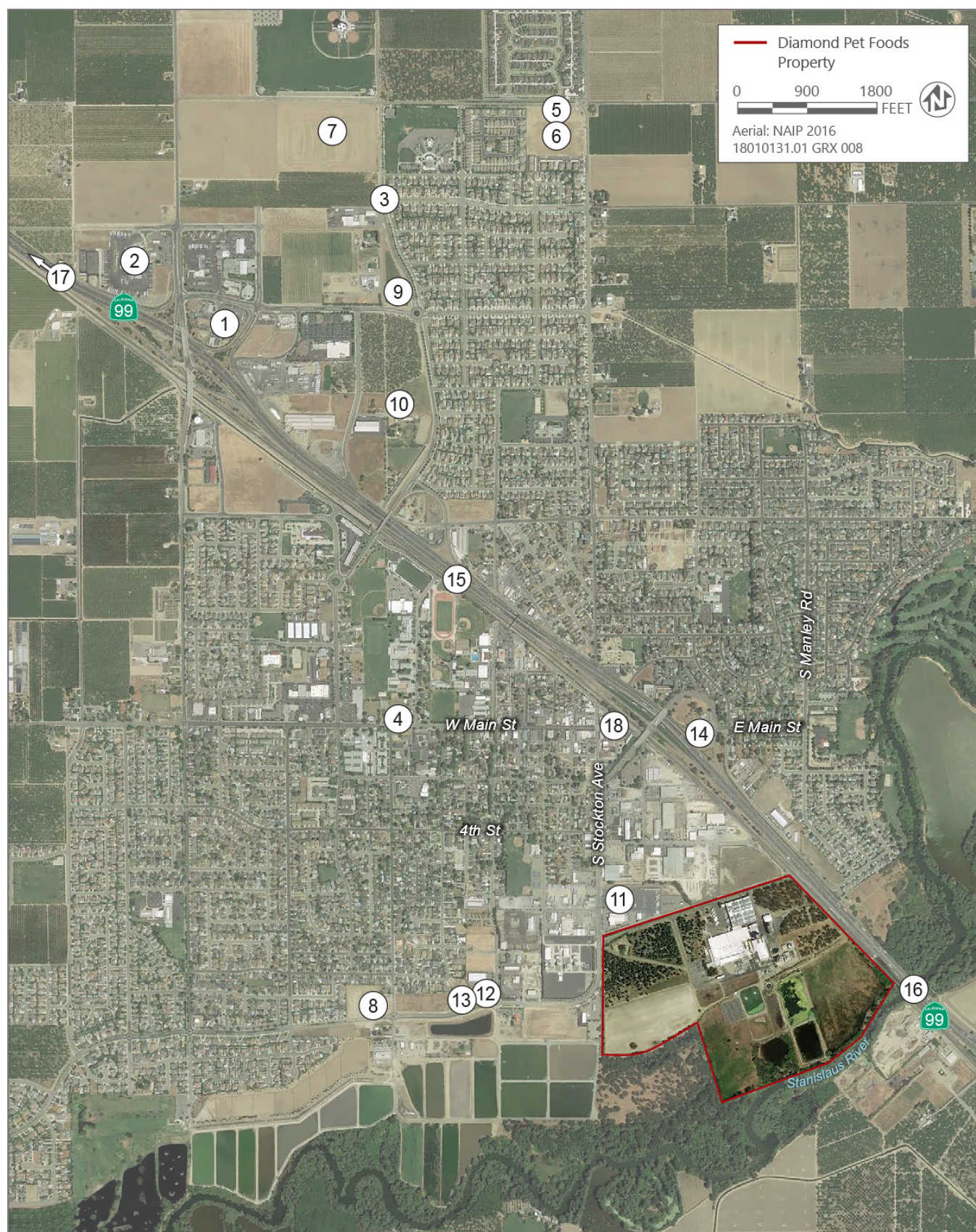
4.2.2 Regional Planning Environment

The *City of Ripon General Plan 2040*, adopted in September 2006, establishes the land use pattern and goals for development and growth in the City of Ripon. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the primary agency responsible for planning to meet federal and State ambient air quality standards in San Joaquin County. SJVAPCD works with other local air districts in the region to maintain the region's portion of the State implementation plan (SIP) for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the federal ozone standard.

These plans were relied upon in preparing the cumulative impact analysis. The documents are available for review at the City of Ripon Planning Department at 259 N. Wilma Avenue, Ripon, CA 95366.

4.2.3 Related Projects

Table 4-2 provides a list of past as well as ongoing and probable future projects that would affect the local area and that meet the requirements stated above. The listed projects are in the project vicinity and have the possibility of interacting with the proposed Diamond Pet Foods Project to generate related impacts (Figure 4-1; the map numbering corresponds to the numbers in Table 4-2). This list of projects was utilized in the development and analysis of the cumulative settings and impacts for each resource topic. Past and current projects in the project vicinity were also considered as part of the cumulative setting as they contribute to the existing conditions upon which the proposed Diamond Pet Foods Project and each probable future project's environmental effects also are described; these projects are included in Table 4-2.



Source Data compiled by Ascent Environmental in 2018

Figure 4-1 Cumulative Projects

Table 4-2 Cumulative Projects

Map Number	Project	Location	Project Description	Project Approval/ Implementation (as of October 2019)	Project Type
City of Ripon Projects within Approximately 2 Miles of Project Site					
1	Panda Express	1422 W. Colony Road	The project involves construction of a 2,600-square-foot fast food restaurant.	Approved; under construction	Commercial
2	Pilot Travel Center	1501 N. Jacktone Road	The project involves construction of a 7,900-square-foot truck repair shop.	Approved; completed	Commercial
3	AAA Truck Wash	1748 W. Santos Avenue	The project involves construction of a 11,860-square-foot truck wash facility.	Approved; construction not started yet	Commercial
4	Ripon Christian Pre-School	839 W. Main Street	The project involves construction of an 8,178-square-foot pre-school facility.	Approved; completed	Commercial
5	Ripon Gardens II Commercial	122 W. River Road	The project involves construction of a 15,996-square-foot, multi-tenant, commercial building and a 6,286-square-foot restaurant.	Approved; under construction	Commercial
6	Ripon Gardens II Apartments	1663 North Ripon Road	110-unit apartment complex	Approved; under construction	Residential
7	The Vineyards Subdivision	southwest corner of River Road and Fulton Avenue	133-lot, single-family subdivision	Approved; under construction	Residential
8	Alexandra Place Subdivision	northwest corner of Doak Boulevard and Vera Avenue	19-lot, single-family subdivision	Approved; under construction	Residential
9	Meadowbrook Subdivision	1040 Goodwin Drive	93-lot, single-family subdivision	Approved; construction not started yet	Residential
10	Meadowood Subdivision	980 Warren Road, 1001 Warren Road, and 1050 Warren Road	88-lot, single-family subdivision	Approved; construction not started yet	Residential
11	NuCal Foods	720 S. Stockton Avenue	The project involves construction of a 4,560-square-foot addition onto the existing office.	Approved; completed	Industrial
12	DeGraff Development	1101 S. Acacia Avenue	The project involves construction of an 18,000-square-foot light industrial complex (12,000 square feet of warehouse and 6,000 square feet of office).	Approved; completed	Industrial
13	Ted Gaines Development	633 Doak Boulevard	The project involves construction of a 7,100-square-foot multiple tenant light industrial complex (5,900 square feet of warehouse and 1,200 square feet of office)	Approved; construction not started yet	Industrial
14	Mobile Gas Station	334 E. Main Street	The project involves construction of a 2,945-square-foot convenience market with a six-pump fueling facility.	Approved; completed	Commercial
California Department of Transportation District 10 Projects within the Project Vicinity					
15	Route 99 Corridor Enhancement Master Plan	SR 99	The Route 99 Corridor Enhancement Master Plan covers the area from the Route 99 junction with Interstate 5 in Kern County to	Final draft completed in 2005	Transportation

Table 4-2 Cumulative Projects

Map Number	Project	Location	Project Description	Project Approval/ Implementation (as of October 2019)	Project Type
			Sacramento County. This 274-mile section of Route 99 runs south to north through the counties of Kern, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin in the San Joaquin Valley.		
16	Ripon Bridge Rehabilitation Project	Stanislaus River Bridge	Replace a portion of the southbound Stanislaus River Bridge on SR 99 just south of Ripon, CA, at the San Joaquin and Stanislaus County line.	Approved in September 2016; under construction	Transportation
17	SR 99/120 Interchange Connector Project	SR 99/120 interchange	Caltrans and the San Joaquin Council of Governments proposes to reconstruct the SR 99/120 interchange in San Joaquin County, from the interchange to the Austin Road overcrossing in Manteca.	Approved in December 2015; contract to be awarded in summer 2021, with construction to begin in fall 2021 and end in fall 2023	Transportation
18	Multi-Modal Transit Station	East Main Street/ Industrial Avenue	The project involves construction of a 7,000-square-foot multi-modal transit station and will include a bus loading area and a platform for the Altamont Commuter Express (ACE) train. Approximately 150 off-street parking spaces will be provided within the site.	Construction expected to start within the next five years	Transit Station

Notes: SR = State Route

Sources: Information provided by the City of Ripon in 2018 and 2019; Caltrans 2018

4.3 CUMULATIVE IMPACT ANALYSIS

For purposes of this EIR, the proposed Diamond Pet Foods Project would result in a significant cumulative effect if:

- ▶ the cumulative effects of related projects (past, current, and probable future projects) are not significant, and the incremental impact of implementing the proposed Diamond Pet Foods Project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- ▶ the cumulative effects of related projects (past, current, and probable future projects) are already significant, and implementation of the proposed Diamond Pet Foods Project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

Significance criteria, unless otherwise specified, are the same for cumulative impacts and project impacts for each environmental topic area. This cumulative analysis assumes that all mitigation measures identified in Sections 3.1 through 3.3 to mitigate project impacts are adopted. The analysis herein analyzes whether, after adoption of project-specific mitigation, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects.

4.3.1 Air Quality

Construction and operation of the project would result in emissions of criteria air pollutants (e.g., particulate matter with an aerodynamic diameter of 10 microns or less [PM_{10}] and with an aerodynamic diameter of 2.5 microns or less [$PM_{2.5}$]) and precursors (e.g., oxides of nitrogen [NO_x] and reactive organic gases [ROG]) in the City of Ripon, within the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAB is currently designated as nonattainment with respect to the national ambient air quality standards (NAAQS) for ozone and $PM_{2.5}$ and with respect to the California ambient air quality standards (CAAQS) for PM_{10} and $PM_{2.5}$.

Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving NO_x , ROG, and sunlight. Only the largest individual sources emit NO_x and ROG in amounts that could have a measurable effect on ambient ozone concentrations. However, when all sources throughout the region are combined, they can result in severe ozone problems. Because the region is designated as nonattainment with respect to the NAAQS and/or CAAQS for ozone, PM_{10} , and $PM_{2.5}$, emissions from cumulative development are inherently cumulative.

CEQA-related air quality thresholds of significance are tied to achieving or maintaining attainment designations with respect to the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health.

SJVAPCD has established mass emission thresholds for construction and operational emissions of criteria air pollutants and precursors to determine whether a project's discrete emissions would result in a cumulative, regional contribution (i.e., significant) to the existing nonattainment in the SJVAB. In developing mass emission thresholds of significance to evaluate the contribution of emissions of individual projects, SJVAPCD analyzed emission values against the SJVAPCD's offset thresholds for ozone precursors, which, when applied, prevent further deterioration of ambient air quality in the SJVAB. The mass emission thresholds recommended by SJVAPCD for PM_{10} and $PM_{2.5}$ were adapted from the SJVAPCD's PM_{10} New Source Review offset thresholds (SJVAPCD 2015:82). Using these parameters, SJVAPCD has developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project's emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB.

As discussed under Impact 3.1-1, the emissions level of ROG and NO_x associated with project implementation would not exceed the SJVAPCD-recommended mass emission thresholds and, therefore, their contribution to the nonattainment status in the SJVAB for ozone would not contribute to the nonattainment status for ozone in the SJVAB. By evaluating the project's ROG and NO_x emissions against SJVAPCD's thresholds of significance, it is not foreseeable that the health complications associated with ozone exposure would be exacerbated by the project. Therefore, the short-term contribution of criteria air pollutants and precursors from project construction, combined with other cumulative sources of ozone precursors in the region would **not be cumulatively considerable**.

As discussed under Impact 3.1-2, long-term operation of the project would result in regional emissions of ROG, NO_x , PM_{10} , and $PM_{2.5}$ from area, energy, and mobile sources. Area-source emissions include those from the combustion of natural gas. Energy-source emissions include those from the consumption of electricity. Mobile-source emissions, for the purpose of this analysis, include the vehicle miles traveled associated with the net increase in employees and truck haul trips to and from project operation. Long-term operational emissions generated by the project would not exceed SJVAPCD's significance thresholds for ROG, NO_x , PM_{10} , or $PM_{2.5}$. Project-generated emissions would not violate or contribute substantially to an existing or projected air quality violation such that adverse health impacts would occur or conflict with air quality planning efforts of the SJVAPCD. Therefore, the project's contribution to operational criteria air pollutants and precursors would not contribute to the nonattainment status for ozone, PM_{10} , $PM_{2.5}$ in the SJVAB, result in greater acute or chronic health impacts compared to existing conditions, or conflict with air quality planning efforts. Therefore, long-term operation of the proposed project would **not have a cumulatively considerable contribution** to an increase in regional emissions of ROG, NO_x , PM_{10} , or $PM_{2.5}$.

As discussed under Impact 3.1-3, levels of toxic air contaminants (TACs) from project-related construction would not result in a substantial increase in health risk exposure at off-site sensitive receptors, increases in cancer risk greater than 20 in 1 million, or a hazard index greater than one. Also discussed under Impact 3.1-3, operation of the project would result in increased operation of existing boilers and the Regenerative Thermal Oxidizer (RTO) system, as well additional trips by diesel-fueled delivery trucks. A health risk assessment (HRA) was conducted for the project in accordance with SJVAPCD guidance to determine the incremental increase in health risk exposure at off-site sensitive receptors (Yorke Engineering 2019a:26–27, 30–31). The results of the HRA indicate that, at the point of maximum impact, the combined levels of cancer risk would be 12.40 in one million, a hazard index for long-term chronic risk of 0.0032, and a hazard index for acute risk of 0.0022 (Yorke Engineering 2019a:31). These levels of health risk would not exceed SJVAPCD's incremental increase threshold for cancer risk of 20 in one million or its threshold for chronic and acute risk of a hazard index greater than one. Consequently, TACs emitted by the project would **not be a cumulatively considerable contribution** to health risk.

As discussed under Impact 3.1-4, the project would result in the generation of odor emissions from pet food production that could affect nearby sensitive receptors. The RTO system installed at the Diamond Pet Food facility in December 2018 was identified as the best choice of odor abatement systems with the highest expected level of odor abatement. The facility has and continues to operate the RTO system at 1,650 degrees Fahrenheit, which, based on January 2019 source testing, demonstrated VOC abatement of 99.8 percent (Yorke Engineering 2019b:10). The RTO system was designed to abate emissions from four production lines and sized to exceed the level of odor abatement required in the permit issued by SJVAPCD. Furthermore, installation of the RTO system has reduced the number of odor complaints received about the facility and the existing RTO system was designed to treat the exhaust of four production lines. For these reasons, the RTO system would prevent the project from generating a level of odor emissions that would contribute to a substantial cumulative odor effect. Therefore, the project's contribution to odor impacts would **not be cumulatively considerable**.

4.3.2 Greenhouse Gas Emissions and Climate Change

Greenhouse gas (GHG) emissions generated by project construction and operation, discussed under Impact 3.2-1, are inherently cumulative. GHG emissions from one project must be considered in the context of their contribution to cumulative global emissions. The project would result in GHG emissions from construction activities including exhaust from worker commute trips, materials delivery, and the use of equipment that would result in a total of 61 metric tons of carbon dioxide equivalent (MTCO₂e). The increase in energy consumption and vehicle trips associated with project operations would result in approximately 13,150 MTCO₂e/year. This amount of GHG emissions would be additional to the GHGs emitted by the existing three production lines, resulting in the facility generating 46,741 MTCO₂e/year. The addition of the fourth production line would result in the facility exceeding the emissions limit of 25,000 MTCO₂e/year and, therefore, the Diamond Pet Foods facility would become a covered entity required to reduce GHG emissions in accordance with all requirements of the Cap-and-Trade program administered by the California Air Resources Board. With compliance of the Cap-and-Trade program, the project would be consistent with applicable plans and policies adopted for the purposes of reducing GHG emissions. Thus, the project's GHG emissions would **not be a cumulatively considerable contribution** to climate change.

4.3.3 Energy

As presented under Impact 3.3-1, the project would result in an increase in demand for energy; however, the project would meet energy efficiency and advanced technology standards required by California Code of Regulations Title 20. Energy efficiency for the Diamond Pet Food facility would improve with the installation of the fourth production line, as no additional preheating of the natural gas-fueled RTO is needed from the existing three production lines. Construction-related consumption of energy would not be considered inefficient, wasteful, or unnecessary because the energy needs for project construction would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Worker commute

trips and vendor truck trips would be typical for the installation of the fourth production line and there would be no atypical construction-related energy demands associated with the project.

Other facilities and projects in the area would also be required to comply with the California Energy Code and state and local design measures to reduce energy consumption. In addition, planned growth in the area would undergo separate environmental review to ensure that their energy use would not be inefficient, wasteful, or unnecessary. For these reasons, significant cumulative impacts related to energy efficiency would not occur from implementation of the related projects. The project would **not result in a considerable contribution** to a significant cumulative impact related to inefficient or wasteful use of energy.

5 OTHER CEQA SECTIONS

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 21100(b)(2)(A) of the State CEQA Guidelines provides that an EIR shall include a detailed statement setting forth "in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented." Accordingly, this section provides a summary of significant environmental impacts of the project that cannot be mitigated to a less-than-significant level.

Sections 3.1 through 3.3 of this Draft EIR describe the potential environmental impacts of the project and recommend various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, "Cumulative Impacts," determines whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. No significant and unavoidable environmental impacts resulting from the project were identified. All of the impacts associated with the project would be less than significant after implementation of mitigation measures.

5.2 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines (Section 15126) require a discussion of the significant irreversible environmental changes that would be involved in a project should it be implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- ▶ construction materials, including such resources as concrete and steel;
- ▶ water supply for project operation and maintenance activities; and
- ▶ energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy, as described in Section 3.3, "Energy." Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment operating procedures. Long-term project operation would not result in substantial long-term consumption of energy and natural resources because the project would be designed using energy efficient technologies.

5.3 GROWTH-INDUCING IMPACTS

5.3.1 CEQA Requirements

CEQA specifies that growth-inducing impacts of a project must be addressed in an EIR (CCR Section 21100[b](5)). Specifically, Section 15126.2(d) of the State CEQA Guidelines states that the EIR shall:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population

may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project involved construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- ▶ substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this EIR, to reach the conclusion that a project is growth-inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines.

If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of “indirect” effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

5.3.2 Growth-Inducing Impacts of the Project

GROWTH-INDUCING EFFECTS OF CONSTRUCTION

Fabrication of the equipment for the fourth production line would be performed by Extrutech at a location outside of California. Installation of the equipment at the Diamond facility would last for three to four months and would require an average of 15 construction workers per day. The construction labor pool in San Joaquin County is close to 12,000 people (State of California Employment Development Department 2018). Because of the relatively small number of construction workers needed, the relatively short duration required for construction, and the available labor pool, the project is not expected to result in construction workers relocating to the area.

GROWTH-INDUCING EFFECTS OF OPERATION

The project would require up to eight new employees to operate the expanded Diamond Pet Foods Production Facility. Similar to construction, it is assumed that the eight new positions would be filled by local residents. Therefore, the project would not induce growth in the project area, either directly or indirectly.

6 ALTERNATIVES

6.1 INTRODUCTION

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe "... a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "...shall also identify an environmentally superior alternative among the other alternatives." (CCR Section 15126.6[e][2]).

In defining "feasibility" (e.g., "... feasibly attain most of the basic objectives of the project ..."), CCR Section 15126.6(f)(1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Ripon City Council. (See PRC Sections 21081.5, 21081[a] [3].)

6.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

6.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 2, "Project Description," articulated the project applicant's objectives for the proposed Diamond Pet Foods Project, which are repeated below:

- ▶ expand the current pet food production capacity to better meet industry demands;
- ▶ utilize the existing layout/operating space and infrastructure of the facility, which was originally designed in 2010 for four production lines. This avoids additional excavation and ground-disturbance;
- ▶ utilize the existing regenerative thermal oxidation (RTO) system installed in 2018 for control of production emissions as designed to (1) abate emissions from up to four production lines and (2) maximize operating efficiency (lowest fuel usage rate) during operation of four production lines;
- ▶ utilize the existing transportation infrastructure for continued truck and rail deliveries to and from the facility; and
- ▶ minimize environmental impacts to surrounding areas, including residential communities and other sensitive land uses.

6.2.2 Environmental Impacts of the Diamond Pet Foods Project

Sections 3.1 through 3.4 of this Draft EIR address the environmental impacts of implementation of the proposed Diamond Pet Foods Project. No significant and unavoidable environmental impacts resulting from the project were identified. The project's impacts, which would be less than significant after implementation of mitigation measures, are listed below.

AIR QUALITY

- ▶ Short-Term Emissions of Criteria Air Pollutants and Precursors Associated with Installation of Line 4 (less than significant)
- ▶ Operational Emissions of Criteria Air Pollutants and Precursors (less than significant)
- ▶ Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants (less than significant)
- ▶ Exposure of Sensitive Receptors to Odors (less than significant after implementation of mitigation measures)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

- ▶ Generation of Greenhouse Gas Emissions (less than significant)

ENERGY

- ▶ Result in Wasteful, Inefficient, and Unnecessary Consumption of Energy During Project Construction or Operation (less than significant)

6.3 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project

purpose need not be addressed in detail in an EIR. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decisionmaker(s). (See PRC Section 21081[a][3].) At the time of action on the project, the decisionmaker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decisionmaker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decisionmaker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998.)

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

In the case of the subject project, no significant impacts have been identified. The following alternative was considered by the City, but is not evaluated further in this Draft EIR.

6.3.1 Smaller Equipment/Lower Volume Production

Under this alternative, Diamond would install a fourth production line at the Ripon facility, but the equipment would be smaller and/or would have a lower output than the proposed project. This would not be a practical option as the production lines at Diamond need to be identical for the purpose of planning, operation, and maintenance. If non-standard equipment were to be introduced, there would be additional problems with the planning and operation of the equipment and the need for design, purchase, storage, and use of non-standard parts and training for the operators and maintenance staff. Additionally, the installation of smaller equipment or lower volume production would not meet the project objective related to meeting the demands for additional product.

While the implementation of this alternative would reduce air quality impacts, GHG emissions, and energy use, the primary project objective would not be achieved. Because the proposed project would result in less-than-significant impacts (after implementation of mitigation measures), the alternative would not substantially reduce or avoid a significant impact associated with the project (because there are none). Therefore, this alternative was rejected from further consideration.

6.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

Because the project would not result in any significant impacts, the need for alternatives in this EIR is questionable. As stated in CEQA, Section 21002.1, "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project." Even if an alternatives analysis is required, the range of alternatives is limited because there are no significant impacts to avoid or substantially reduce. Thus, only two are evaluated in this Draft EIR.

- ▶ **No Project Alternative:** Under this alternative, no new construction would occur on the project site. The project site would remain in its current condition. The No Project Alternative is required to be evaluated in EIRs.
- ▶ **Offsite Facility Expansion Alternative:** Under this alternative, Diamond would not install a fourth production line at the Ripon facility. Instead, Diamond would increase pet food production capacity at Diamond's facility in Lathrop to meet the company's overall demands. This would require demolition of the existing facility and construction of a new, larger facility. This alternative would be highly impractical given the cost and site constraints.

Further details on these alternatives, and an evaluation of environmental effects relative to the proposed project, are provided below.

6.4.1 No Project Alternative

State CEQA Guidelines Section 15126.6(e)(1) requires that the no project alternative be described and analyzed “to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project.” The no project analysis is required to discuss “the existing conditions at the time the notice of preparation is published...as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (Section 15126.6[e][2]).

Under the No Project Alternative, the project site would remain unchanged from current conditions. The existing Diamond Pet Foods Production Facility would remain operational, with three production lines; the proposed fourth production line would not be installed. The RTO equipment, which has already been installed as part of a separate project, would remain operational and would continue to provide odor abatement for the three production lines. The No Project Alternative would not meet the primary project objective because this alternative would not expand the current pet food production capacity to better meet industry demands. However, as required by CEQA, the No Project Alternative is evaluated in this Draft EIR.

Although it is acknowledged that with the No Project Alternative, there would be no discretionary action by the City, and thus no impact, for purposes of comparison with the other action alternatives, conclusions for each technical area are characterized as “impacts” that are greater, similar, or less, to describe conditions that are worse than, similar to, or better than those of the project.

AIR QUALITY

Under the No Project Alternative, the proposed fourth production line would not be installed, and the existing Diamond Pet Foods Production Facility would continue to operate with three production lines. Construction emissions of criteria air pollutants, ozone precursors, and toxic air contaminants (TACs) would not increase above existing levels. Although this alternative would generate fewer emissions than the proposed project, it would not substantially reduce or avoid a significant impact associated with the project because the project would result in a less-than-significant impact (after implementation of mitigation measures) associated with air quality. (*Less*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Under the No Project Alternative, the proposed fourth production line would not be installed, and the existing Diamond Pet Foods Production Facility would continue to operate with three production lines. Construction emissions of GHGs would not be generated by the project and GHG emissions would remain at existing levels. Thus, the No Project Alternative would generate less GHG emissions compared to the project; however, similar to the discussion of air quality, above, the alternative would not substantially reduce or avoid a significant impact associated with the project. (*Less*)

ENERGY

Under the No Project Alternative, the proposed fourth production line would not be installed, and the existing Diamond Pet Foods Production Facility would continue to operate with three production lines. The No Project Alternative would not increase energy consumption, and continuation of existing energy usage would not be considered inefficient, wasteful, or unnecessary. Thus, the No Project Alternative would result in less energy consumption compared to the project. However, similar to the discussions of air quality and GHG, above, the alternative would not substantially reduce or avoid a significant impact associated with the project. (*Less*)

6.4.2 Offsite Facility Expansion Alternative

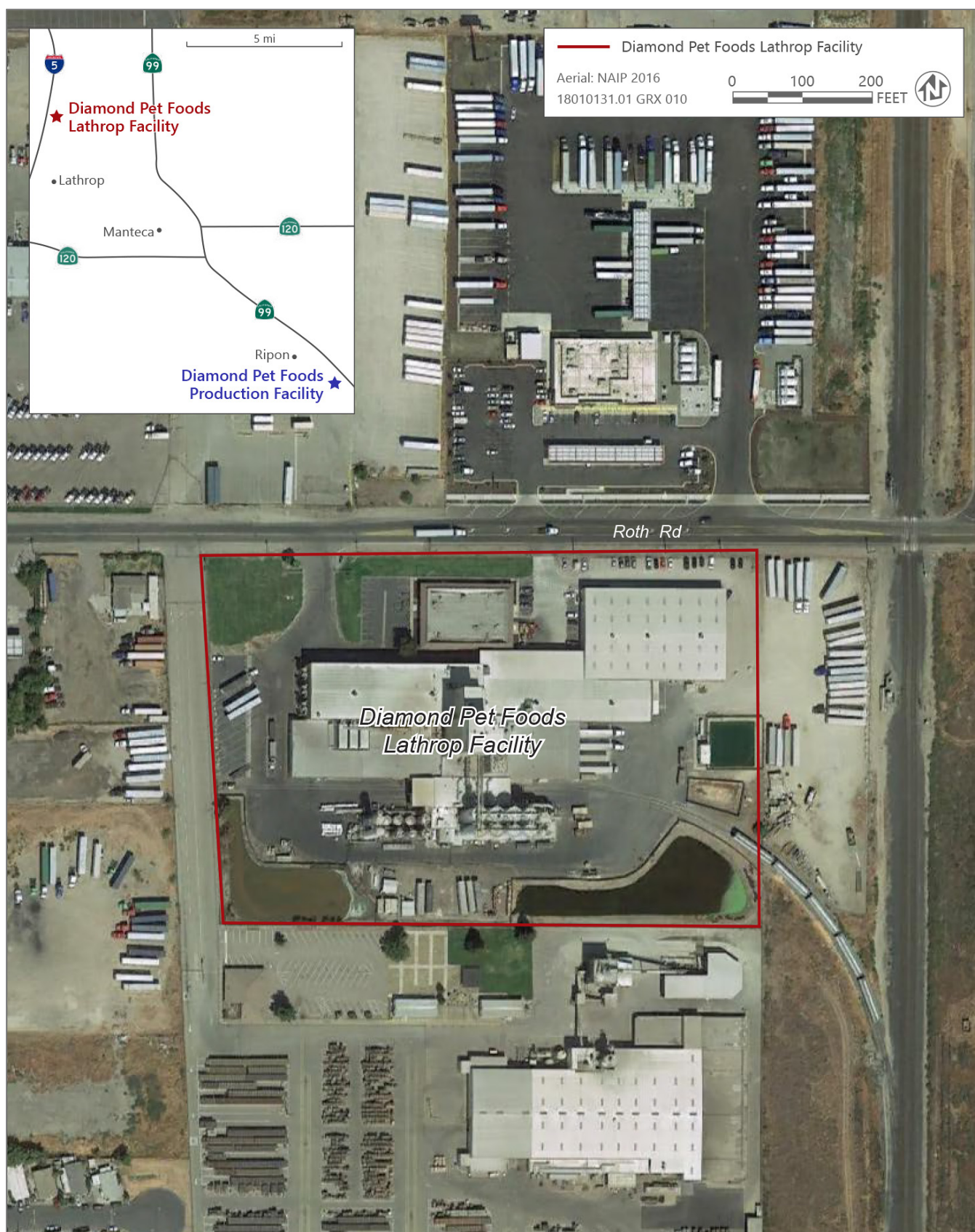
Offsite alternatives are generally considered in EIRs when one of the means to avoid or eliminate the significant impacts of a project is to develop it in a different available location. Such alternatives are especially appropriate where a proposed project would put a site to uses different than those contemplated in the governing general plan, which presumably reflects land use policies reached after much deliberation and public involvement, and also in instances where there is an ample supply of similarly situated land that could be developed for a project. The *City of Ripon General Plan* (2006) designates the project site as Heavy Industrial. The Heavy Industrial land use designation applies to manufacturing, processing, assembling, research, wholesale and storage uses, trucking terminals, railroad and freight stations, public and quasi-public uses, and similar and compatible uses. Thus, the adopted plan pertinent to the project site envisions it as an industrial area. Further, the project is geographically tied to existing transportation infrastructure.

In addition to the Ripon facility, Diamond currently produces pet food at four other manufacturing facilities located in: Meta, Missouri; Gaston, South Carolina; Lathrop, California; and Dumas, Arkansas. Under this alternative, Diamond would not install a fourth production line at the Ripon facility. Instead, Diamond would expand the current pet food production capacity at another Diamond facility to meet the company's overall demands.

Diamond's five pet food production facilities are strategically located across the country. Two of the facilities are on the west coast, in Lathrop and Ripon (Figure 6-1). The Lathrop facility is currently at capacity and, as it is currently designed, there is no physical space within the existing facility to construct an additional line. Adding a production line to the Lathrop facility would require demolishing the existing facility and designing/constructing a new facility. The size of the existing Lathrop site is small and would present major constraints for developing a larger facility at this location. The development costs and site constraints substantially affect the feasibility of this alternative.

The only other plant with space for an additional line is located in Dumas, Arkansas, which is approximately 2,000 miles from Ripon. There would be additional air pollution, GHG emissions, etc., due to the transporting of product across the country, which is environmentally inferior to the project. Further, installing the additional production line at the Dumas facility would require Diamond to incur a substantial expense because of the distance and transportation costs. Diamond estimates costs of \$3,900 per truck in transportation costs alone. On a daily basis, 13 trucks would be required to transport the pet food from the fourth production line in Dumas to Ripon, costing approximately \$50,700 per day (or approximately \$18,404,100 per year). Building the additional production line at the Dumas location would create an economic disadvantage to Diamond, which would eliminate the economic feasibility of the project at this location. Although increasing the operational capacity at the Lathrop facility is highly impractical, it is considered more feasible than the Dumas facility, and is therefore used in the evaluation of the offsite alternative.

As described above, the proposed project would not result in any significant impacts that cannot be mitigated to a less-than-significant level. Implementation of this alternative would likely increase impacts in Lathrop because the same types of impacts (e.g., air quality and GHG emissions, increased energy demand) would be generated. Further, the increased construction effort associated with this alternative would generate impacts greater than those of the proposed project, as discussed in more detail below. Also discussed below, unlike the proposed project, the Offsite Facility Expansion Alternative would require ground disturbance; therefore, environmental issue areas that were dismissed from further environmental review in this Draft EIR—those that could result from ground disturbance—would require additional analysis for this alternative, and it is possible that this alternative could result in potentially significant impacts, although the impacts would likely be mitigated to less-than-significant levels; the details are discussed below.



Source: Image prepared and provided by Ascent in 2019

Figure 6-1 Diamond Pet Foods Lathrop Facility

AIR QUALITY

The Offsite Facility Expansion Alternative would involve a substantially higher level of construction than the proposed project because, rather than simply installing equipment, this alternative would require ground disturbance, as well as likely demolition and reconstruction of portions of the existing structures in Lathrop. This would involve a greater number of large pieces of equipment and more construction workers. Therefore, the construction activities associated with this alternative would result in greater air pollutant emissions than the proposed project. Furthermore, sensitive receptors are located 200 feet closer to the Lathrop facility than to the Ripon facility; therefore, impacts related to odors and health risk may be greater under this alternative. Overall, air quality impacts associated with the Offsite Facility Expansion Alternative would be greater than the proposed project. (*Greater*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

For the same reasons discussed above under “Air Quality,” impacts associated with GHG emissions would be greater under the Offsite Facility Expansion Alternative due to the increased level of construction compared to the proposed project. Therefore, GHG impacts would be greater compared to the proposed project. (*Greater*)

ENERGY

For the same reasons discussed above under “Air Quality” and “Greenhouse Gas Emissions and Climate Change,” impacts associated with energy usage would be greater under the Offsite Facility Expansion Alternative due to increased energy expended during construction. Therefore, energy impacts would be greater compared to the proposed project. (*Greater*)

OTHER ENVIRONMENTAL ISSUE AREAS

Because the Offsite Facility Expansion Alternative would likely require ground disturbance, it is possible that it could result in potentially significant impacts related to archaeological and tribal cultural resources, hazardous materials, hydrology and water quality, geology and soils, and biological resources. It is likely that such impacts could be mitigated to less-than-significant levels; however, the residual impact (level of impact remaining after mitigation) would likely be greater than the proposed project, which would result in no impact related to these issue areas (because of lack of ground disturbance). (*Greater*)

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Because the No Project Alternative would result in lower impacts resulting from construction and operation of the Diamond Pet Foods Project, it is the environmentally superior alternative. However, the No Project Alternative would not meet the primary project objective because this alternative would not expand the current pet food production capacity to better meet industry demands.

When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative from among the other action alternatives evaluated. As illustrated in Table 6-1, the proposed project would be environmentally superior to the Offsite Facility Expansion Alternative because, under this alternative, impacts related to air quality, GHG, energy, and other environmental issue areas would be greater than the proposed project. The Offsite Facility Expansion Alternative would not result in any reduction in impacts to the environment compared to the proposed project.

For these reasons, the proposed project is the environmentally superior alternative because all impacts would be less than significant after implementation of mitigation measures, and all project objectives would be met.

Table 6-1 Summary of Environmental Effects of the Alternatives Relative to the Diamond Pet Foods Project

Environmental Topic	Proposed Project	No Project Alternative	Offsite Facility Expansion Alternative
Air Quality	LTSM	Less	Greater
Greenhouse Gas Emissions and Climate Change	LTS	Less	Greater
Energy	LTS	Less	Greater
Other Environmental Issue Areas ¹	NI	Similar	Greater

Notes: LTS = less than significant; LTSM = less than significant after mitigation; NI = no impact

¹. Other Environmental Issue Areas likely include biological resources, archaeological/tribal cultural resources, hazardous materials, hydrology and water quality, and geology and soils.

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