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June 22, 2020

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RE: Valley Center Storage Project Greenhouse Gas Screening Letter – San Diego County

The purpose of this memorandum is to summarize the results of the greenhouse gas (GHG) analysis conducted for the Valley Center Storage Project (Project). This study quantifies GHG emissions associated with construction and operation of the Project and includes a completed San Diego County Climate Action Plan (CAP) Consistency Checklist.

GHGs analyzed in this study are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O). To simplify GHG calculations, both CH_4 and N_2O are converted to equivalent amounts of CO_2 and are identified as carbon dioxide equivalent ($MTCO_2e$). Applicable regulatory requirements are identified as ***Attachment A*** to this letter.

Project Overview

Valley Center ESS, LLC (Developer) plans to construct, own and operate the Valley Center Storage Project, a lithium-ion based battery energy storage facility capable of delivering up to 140 megawatts (MW) for approximately 4 hours on an 8.93-acre parcel and associated utility and access easement in Valley Center, San Diego County (the Project). The Project will interconnect to the existing, adjacent San Diego Gas & Electric (SDG&E) 69kV Valley Center Substation via an approximately 0.3-mile underground generation tie line (gen-tie line). The Project will be comprised of sets of four battery enclosures (each enclosure approximately 31.6 feet long by 5.7 feet wide by 8.6 feet high) that will house the integrated Battery Energy Storage System (BESS) including battery cells, modules, racks, a fully integrated fire and safety systems, HVAC systems, and other electrical systems. The batteries will be charged from the CAISO (California Independent System Operator) grid via the Project's interconnection to the SDG&E Valley Center Substation. Energy stored in the Project will then be discharged back into the grid when the energy is needed, providing essential electricity reliability services to the local area. Construction of the Project is anticipated to begin in 2020 with commencement of Project operations in 2021.

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Project Location

The Project site is located at 29523 Valley Center Road, Valley Center, California on a parcel of private land (APN 189-013-20-00) within unincorporated Valley Center in San Diego County (Figure 1). San Diego County (County) identifies land use and zoning of the Project site as Medium Impact Industrial (I-2) and General Impact Industrial (M54) use regulation. Permitted uses in the Medium Impact Industrial zone are manufacturing, processing, and assembly; warehousing and distribution; large equipment supply and sales; and other industrial or commercial activities. The M54 use regulation allows for unenclosed commercial and industrial operations having potential nuisance characteristics such as construction, sales and services. The County of San Diego has identified the Project as a Minor Impact Utility, defined as public utilities which have a local impact on surrounding properties and are necessary to provide essential services. All Minor Impact Utilities, including the Project, are permitted by right within the M54 use regulation (County of San Diego Zoning Ordinance).

Additionally, the Project Area is located in an area under County Special Area Regulations, Designator B: Community Design Review Area, where visual impacts criteria must be met through a limited Site Plan approval process. These regulations are intended to ensure that added consideration is provided to visual impacts in areas of special interest. Surrounding land uses include Limited Impact Industrial to the north, Semi-Rural Residential (SR-4 and SR-2) to the east and south, and Medium Impact Industrial to the west.

The Project site is defined as the 8.93-acre parcel and the Project-controlled access easement. The Project Area is described as the Project site and the off-site underground gen-tie line alignment.

Project Description

The Project will be comprised of lithium ion battery modules housed in cabinets within up to 58 sets of 4 non-walk-in enclosures on dedicated foundations that will be capable of charging and delivering up to 140MW for approximately 4 hours. Each enclosure will contain integrated battery, heat/fire and safety management systems including electrical and mechanical controls, ventilation systems, HVAC, fire alarm detection and heat management systems. From the BESS containers, low voltage cables will connect to low profile, pad- inverter/transformers located adjacent to the BESS units, and to a control center enclosure called a Power Distribution Center (PDC).

Major Project equipment and facilities include:

- Up to 58 sets of 4 BESS enclosures including battery modules and integrated battery, fire and safety management systems.
- Up to 58 pad-mounted inverter/transformers located adjacent to each set of BESS enclosures to convert direct current into alternative current and step the units' voltage up to 34.5 kV.

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- 2 PDC enclosures which are modular electrical equipment enclosures housing energy management systems, communications/SCADA equipment, and other electrical equipment.
- A BSU (Battery Step-Up Transformer), circuits will enter the BSU from the PDC at 34.5 kV where voltage will be stepped up to 69kV.
- An approximately 0.3-mile 69kV gen-tie line will be constructed from the Project BSU north across Valley Center Road to SDG&E 69kV Valley Center Substation across one of four alignment options (described further below).
- Security lighting and fencing
- Stormwater drainage and retention basins
- Signage

The exact size and quantity of the battery storage containers and inverter transformers may vary depending on the battery and BESS manufacturer(s) selected for the Project.

Access to the Project site is provided from Valley Center Road via a permanent Project-controlled easement. The site access road will comply with County regulations and be stabilized using gravel in order to provide access to operational, fire department, and emergency vehicle access to the facility. Project site equipment and facilities (with the exception of stormwater drainage and retention basins) will be surrounded by a solid, 8-foot tall vinyl fence or a similar solid fence. The fence will be built flush with the ground and have the appearance of a paneled wood fence. Existing fences surrounding the property boundary will remain. Project design will adhere to County Guidelines, including the Valley Center Design Guidelines. Lighting at the Project site will be installed per County requirements.

The Project will be un-maned during operations, with no buildings or parking areas. The Project would not require restroom facilities. Any operational water that may be required for routine maintenance would be sourced by Valley Center Municipal Water District (VCMWD) service through use of an existing fire hydrant adjacent to the site and/or a new fire hydrant onsite. No groundwater would be used for any purposes during construction or operational phases of the Project.

The Project will interconnect to the existing, adjacent SDG&E 69kV Valley Center Substation via a Project-constructed underground gen-tie line that, upon leaving the Project site will cross Valley Center Road heading north onto SDG&E property for approximately 0.3 miles. Four alignment options are being considered and evaluated for the gen-tie line (Figure 1). All four options leave the Project site access easement, cross under Valley Center Road and then:

- Option A: enters SDG&E's property and heads north, adjacent to existing SDG&E underground circuits within SDG&E's property and enters the substation at the point of interconnect.

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- Option B: enters SDG&E's property following Option A, but travels across the property in a northwesterly direction until reaching the substation.
- Option C: follows the southern and western property boundaries within SDG&E's property until turning easterly to access the substation from the west.
- Option D: follows the west-bound Valley Center Road right-of-way before entering SDG&E's property, following Option C in the easterly direction to access the substation.
- All four options are approximately the same length.

The Project will be operated, monitored and dispatched remotely on a day-to-day basis. Crews of two to four persons will periodically visit the site (approximately twice per month) for routine inspection and maintenance of the facilities and site. For purposes of this worst-case analysis, it was assumed that 4 trips daily would occur. The Developer will own and maintain the gen-tie line up to the point where the gen-tie line enters SDG&E property, where ownership and maintenance responsibilities will be transferred to SDG&E.

The facility is anticipated to have a Project life of approximately 30 years. At the end of the Project life, most of the Project's enclosures, batteries, and electrical equipment (breakers, transformers, inverters) would be removed and recycled. Equipment foundations and pads would be demolished and removed.

Project Construction

Project construction includes site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. The Project would require the grading of approximately 3,000 cubic yards of soils, balanced on site (no net import or export). The approximately 0.3-mile gen-tie line will be installed underground by the Project to the SDG&E 69kV Valley Center substation.

Construction Schedule, Sequence and Phasing

In accordance with the County Noise Ordinance, Project construction will occur between the hours of 7:00AM and 7:00PM Monday through Saturday. Construction of the Project is anticipated to occur over approximately 6 months, beginning as early as fourth quarter 2020. Project construction would likely occur in two phases:

- Phase 1 (Outside Flood Plain) – Installation of battery storage enclosures and associated civil, electrical and structural features to include graveled access roads and underground electrical components.

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- Phase 2 (Inside Flood Plain) – Installation of remaining battery storage enclosures and associated civil, electrical and structural features to include features, such as pad-mounted switchgear, step-up transformer(s), and a control center enclosure.

The two construction phases would likely be executed consecutively; Phase 1 followed by Phase 2. However, for the purposes of preparing a worst-case CEQA analysis, technical analyses were completed assuming the two construction phases would occur simultaneously over a period of approximately 6 months.

The sequence of construction activities for the BESS would generally occur as follows (with activities limited within the floodplain as described in Phase 1 and Phase 2 above):

1. Equipment staging and mobilization
2. Site preparation and grading
3. Preparation of equipment foundations
4. Site compaction and gravel as necessary
5. Excavating footings and pads
6. Pour-in-place concrete footings, pad foundations, and/or piers
7. Install below-ground conduit banks
8. Install PCS, power distribution systems, and pad-mounted transformers
9. Install below-ground and above-ground conduit
10. Install safety features, permanent fencing and security lighting
11. Commissioning

Construction Personnel and Equipment

Construction personnel are expected to consist of approximately 10 to 15 workers on average, depending on the construction activities. Project laydown and construction staff parking is expected to be located on-site to the extent practicable. The Project may need to utilize an offsite temporary use area, up to approximately 2 acres in size, for equipment storage during construction. Should it be needed, the temporary use area would be located within 2 miles of the Project site, on a site that has been previously disturbed, and where temporary equipment storage is an allowable use and compatible with the existing uses on the property. The technical analyses prepared for the Project have been conducted assuming use of a temporary offsite area following these parameters. If it is determined that use of a temporary offsite area is needed during Project construction, the selected location will be submitted to the County and shown to be consistent with the technical analyses performed for the Project.

Typical equipment expected to be used during Project construction and commissioning:

- Excavator (2)
- Backhoe (2)

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- Dozer (1)
- Roller/Compactor (1)
- Dump truck (2)
- Concrete mixer (3)
- Flatbed-mounted utility crane (1)
- Portable generator and welding equipment (1)
- Forklift (1)
- Pickup trucks (4)
- Utility line trucks (2)

Methods and Background

GHG impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality and GHG model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. CalEEMod inputs/outputs are shown in ***Attachment B*** to this letter. The County recognizes the CalEEMod Version 2016.3.2 as an acceptable model for projects of this nature.

The County's General Plan Update (approved in 2011) provides smart growth and land use planning principles designed to reduce GHG emissions. GHG reduction policies are addressed within multiple elements of the General Plan Update. The strategies for reduction of GHG emissions in the General Plan Update include reducing vehicle miles traveled (VMT), energy consumption, water consumption and solid waste. The General Plan Update also discusses the increased generation and use of renewable energy sources to reduce non-renewable electrical and natural gas energy consumption.

A project's adherence to the County's General Plan can be determined through demonstrating consistency with General Plan land use assumption and policies. If a project would generate fewer GHG emissions than the maximum allowable buildout of the site under the General Plan land use designations, the project would have a less than significant GHG impacts.

The project would also be required to prepare a CAP Checklist. The County's CAP has been designed to reduce County GHG emissions consistent with State legislative requirements and includes strategies and measures to reduce GHG emissions from community and County operations. The CAP includes GHG Reduction Strategies and GHG Reduction Measures to reduce GHG emissions (County of San Diego, 2018). The site-specific CAP Checklist is provided as ***Attachment C*** to this study.

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Estimated Project-Related Construction Emissions

Construction of the Project is anticipated to begin in 2020 and be completed in 2021 and would occur over approximately 6 months. The sequence of construction activities for the Project would generally occur as follows (with activities limited within the floodplain as described in Phase 1 and Phase 2 above):

1. Equipment staging and mobilization
2. Site preparation and grading
3. Preparation of equipment foundations
4. Site compaction and gravel as necessary
5. Excavating footings and pads
6. Pour-in-place concrete footings, pad foundations, and/or piers
7. Install below-ground conduit banks
8. Install PCS, power distribution systems, and pad-mounted transformers
9. Install below-ground and above-ground conduit
10. Install safety features, permanent fencing and security lighting
11. Commissioning.

The estimated construction schedule and construction equipment list is identified in Table 1.

Table 1: Expected Construction Equipment and Durations

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	10/1/2020	10/14/2020	
Rubber Tired Dozers			2
Tractors/Loaders/Backhoes			2
Grading Access Road	10/15/2020	11/11/2020	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Construction including Offsite Connections	11/12/2020	3/30/2021	
Generator Sets			1
Rough Terrain Forklifts			1
Crane Use to set Equipment	1/1/2021	1/28/2021	
Cranes			1

This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions from projects of similar size and scope.

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Based on modeling conducted, construction of the Project would generate 83.87 MT CO_2e over the estimated construction period. Given the fact that the total emissions would ultimately contribute to cumulative levels, it is acceptable to average the total construction emission over the life of the Project, which is assumed to be 30 years, in order to evaluate Project emissions against those allowed by the General Plan and is consistent with the South Coast Air Quality Management District (SCAQMD) recommendations for construction GHG emissions (SCAQMD, 2008). Given this, the Project would add approximately 2.8 MT CO_2e per year from construction.

Additionally, as noted above, the Developer would decommission the Project once its lifecycle has been reached and would include demolition and removal of the equipment. This phase is expected to be accomplished over a period less than that of construction. Demolition intensity would be significantly less than Project construction and is anticipated to generate fewer emissions. However, for screening purposes alone, the following table demonstrates the resultant emissions if the Project produced equal GHG emissions during decommissioning to that of construction, or a doubling of emissions or 5.6 MT CO_2e combined (construction and decommissioning). A summary of the estimated Project construction emissions is shown in Table 2.

Table 2: Expected Annual Construction CO_2e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2020	0.00	47.19	47.19	0.01	0.00	47.48
2021	0.00	36.25	36.25	0.01	0.00	36.39
					Total	**83.87**
					Yearly Average Construction Emissions (Metric Tons/year over 30 years)	**2.80**
					Screening GHG construction Doubling to account for Decommissioning (Metric Tons/year over 30 years)	**5.60**
Expected Construction emissions are based upon CalEEMod modeling assumptions (Table 1 above)						

Estimated Project-Related Operational Emissions

Construction would be completed in 2021 and the first full year of operations would be expected in 2022. Operational-related emissions would result primarily from vehicle exhaust emissions associated with maintenance staff traveling to and from the Project site. CalEEMod was used to estimate annual operational-related emissions, summarized below in Table 3. Combining annual construction emissions and the expected operational emissions, the Project would generate emissions of 13.35 $MTCO_2e$ per year. Also, as noted above, the Project has completed the County CAP Checklist which is attached to this report as ***Attachment C.***

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Table 3: Operational Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	5.84	5.84	0.00	0.00	5.84
Waste	0.61	0.00	0.61	0.04	0.00	1.51
Water	0.00	0.40	0.40	0.00	0.00	0.40
Sub Total (MT/Year)						**7.75**
Amortized Construction Emissions (Table 2 above)						**5.60**
Total Construction and Operations (MT/Year)						**13.35**
Data is presented in decimal format and may have rounding errors.						

General Plan Land Use

The County identifies land use and zoning of the Project site as I-2 and an M54 use regulation. Uses in the Medium Impact Industrial zone are limited primarily to manufacturing, processing, and assembly; warehousing and distribution; large equipment supply and sales; and other industrial or commercial activities. The M54 use regulation allows for unenclosed commercial and industrial operations having potential nuisance characteristics such as construction sales and services. These uses would generally allow for a significantly higher number of daily employee trips, vendor trips, and direct customer trips which would generate higher levels of GHG emissions as compared to the unmanned Project. During project operations, a majority of the GHG emissions for the proposed project and other projects that could be developed under the M54 use regulation would be generated by mobile sources (i.e. on-road vehicles generated by the project). For the purposes of this analysis, transportation emissions were used as a surrogate to determine the project's consistency with estimated GHG emissions generated under the General Plan land use designation.

Also, it should be noted that Minor Impact Utilities, such as the Project, refers to public utilities which have a local impact on surrounding properties and are necessary to provide essential services. Also, it should be noted that Minor Impact Utilities are permitted by right within the M54 use regulation. Based on this, the General Plan would allow for a more intense project having a larger vehicular trip base and a corresponding higher GHG emissions footprint than the unmanned Project proposed. Therefore, since the Project would generate fewer emissions than allowed under the General Plan a less than significant cumulatively considerable increase in GHG emissions is expected.

Additionally, it should be noted that battery storage projects, such as the Project, assist the County in achieving goals within the General Plan, to increase the uses of renewable energy

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sources and reduce non-renewable electrical and natural gas energy consumption. By adding battery storage to the utility grid, the Utility can improve the electrical demand response within the County without using spinning reserve from a carbon burning power plants. This effort directly assists the County in achieving goals outlined in the County's General Plan (County of San Diego, 2011) such as:

COS 14 - Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment. and

COS 18 – Energy systems that reduce consumption of non-renewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities.

For questions, please contact me directly at (760) 473-1253.

Sincerely,

Jeremy Louden
Ldn Consulting, Inc.

Attachments:

Attachment A: GHG Regulatory Requirements
Attachment B: CALEEMOD Inputs/Outputs
Attachment C: County CAP Checklist

Sources:

County of San Diego. (2011). *General Plan - Chapter 5 Conservation and Open Space Element.*

County of San Diego. (2018). *Climate Action Plan (CAP).* Retrieved from https://www.sandiegocounty.gov/content/sdc/pds/ceqa/Climate_Action_Plan_Public_Review.html

SCAQMD. (2008). Retrieved 2018, from http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf

GHG Regulatory Requirements

Federal Greenhouse Gas Regulations

Massachusetts v. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the federal Clean Air Act. On December 7, 2009, the EPA Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs— Carbon Dioxide CO_2, CH_4, N_2O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

State Greenhouse Gas Regulations

Executive Order S-3-05

EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32,

CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in accordance with Health and Safety Code Section 38561. The *Scoping Plan* established an overall framework for the measures that will be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The 2008 *Scoping Plan* evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team[1] early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program. The key elements of the 2008 *Scoping Plan* include the following (CARB, 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
2. Achieving a statewide renewable energy mix of 33 percent
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

[1] The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards and departments; these members work to coordinate statewide efforts to implement GHG emissions reduction programs and adaptation programs.

In the 2008 *Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *Scoping Plan's* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations (CARB, 2011). Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*). The stated purpose of the *First Update* was to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the *First Update*, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identified key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

Based on CARB's research efforts presented in the *First Update*, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the *First Update*, CARB recalculated the state's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* (*Second Update*) for public review and comment (CARB, 2017). This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,[2] inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *Second Update* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *Second Update* also recognizes that such an achievement "may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *Second Update* in December 2017.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to

[2] In July 2017, AB 398 was enacted into law, thereby extending the legislatively-authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target; make changes to CARB's membership, and increase legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members. The legislation further requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and identify specific information for GHG emissions reduction measures when updating the scoping plan, including information regarding the range of projected GHG emissions and air pollution reductions that result from each measure and the cost-effectiveness (including avoided social costs) of each measure (see Health & Safety Code Section 38562.7).

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new buildings and alterations or additions to existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2013 Title 24 standards went into effect on July 1, 2014 and were estimated to reduce energy uses between 3.8% to 36.4%, depending on the energy source and land (Architectural Energy Corporation (AEC), 2013).

The 2016 Title 24 standards, which went into effect on January 1, 2017, are the currently applicable standards. When comparing the 2013 and 2016 standards for electrical consumption, it is expected that low-rise, single-family detached homes and multi-family homes would use 12% and 15% less electricity under the 2016 standards, respectively. Similarly, implementation of the 2016 standards is expected to reduce natural gas consumption by 21% in single-family homes and 31% in multi-family homes. Newly constructed non-residential buildings are estimated to achieve a 5% reduction in electricity consumption under the 2016 standards and no significant change relative to natural gas consumption (California Energy Commission, 2015). The current version of CalEEMod used in this analysis, as a default parameter, utilizes compliance with the 2016 Title 24 standards to estimate GHG emissions.

The Project would be required, at a minimum, to comply with the latest version of Title 24 standards at the time the Project seeks building permits. This will likely be the 2019 version of Title 24 which will continue to improve upon the 2016 Standards for residential and nonresidential buildings. One of the most notable changes is the requirement for the installation of rooftop solar on all residential buildings (California Energy Commission, 2017)The 2019 Standards will go into effect on January 1, 2020.

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings

- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- Sixty five (65) percent of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements; stricter water conservation, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

Zero Net Energy Design Goals

As recognized in the *First Update* to the *Scoping Plan*, the California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. As background, the California Public Utilities Commission first set forth its zero net energy goals in the 2008 Energy Efficiency Strategic Plan and the 2011 Big Bold Energy Efficiency Strategies. The key policy timelines include: (1) all new residential construction in California will be zero net energy by 2020, and (2) all new commercial construction in California will be zero net energy by 2030. As most recently defined by the CEC in its 2015 *Integrated Energy Policy Report*, a zero net energy code building is one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building using the CEC's Time Dependent Valuation metric. It should be noted that Title 24 (2019) which will be effective in 2020 requires rooftop solar for all new residential units.

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must

be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include: refrigerators, refrigerator-freezers and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Mobile Sources

AB 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30 percent (CARB, 2017).

EO S-1-07

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy within their Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the San Diego Association of Governments (SANDAG) are a 7 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035. SANDAG completed and adopted its *2050 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) in October 2011. In November 2011, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. The matter was recently resolved by the California Supreme Court (Case No. S223603), which held that SANDAG did not abuse its discretion when certifying its EIR by declining to explicitly engage in an analysis of the consistency of the RTP/SCS' projected 2050 GHG emissions with the GHG reduction goals reflected in Executive Order No. S-3-05.

In 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines and no subsequent litigation challenge was filed. More specifically, in

October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets CARB's 2020 and 2035 reduction targets for the region (SANDAG, 2015). In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB, 2017). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (CARB, 2012).

EO B-16-12

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet. As of January 2018, the Governor has called for as many as 1.5 million EV by 2025 and up to five million EV by 2030 (Office of Governor Edmund G. Brown Jr., 2018).

SB 350

In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

Renewable Energy Procurement

SB 1078

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030 be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Water

EO B-29-15

In response to drought-related concerns, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Solid Waste

AB 939 and AB 341

In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2018). Increased diversion of organic materials (green and food waste) will also reduce GHG

emissions (CO_2 and CH_4) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

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Valley Center Storage Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	8.93	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - site is 8.93 acres

Construction Phase - construction schedule

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - construction equipment

Off-road Equipment - construction equipment

Trips and VMT - Trips

Vehicle Trips - vehicle trips

Energy Use - Electrical energies

Water And Wastewater - Basic onsite landscaping will be watered 300gal/day

Solid Waste - solid waste is not likely, though 3 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - tier 4

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	230.00	99.00
tblConstructionPhase	NumDays	230.00	20.00
tblEnergyUse	LightingElect	0.00	12,150.00
tblEnergyUse	NT24E	0.00	4,502,250.00
tblLandUse	LotAcreage	0.00	8.93
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	3.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00
tblWater	OutdoorWaterUseRate	0.00	109,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0421	0.4301	0.2763	5.4000e-004	0.1296	0.0205	0.1501	0.0678	0.0191	0.0869	0.0000	47.1898	47.1898	0.0115	0.0000	47.4780
2021	0.0208	0.1945	0.2207	4.2000e-004	5.1700e-003	9.0100e-003	0.0142	1.3700e-003	8.7100e-003	0.0101	0.0000	36.2534	36.2534	5.5500e-003	0.0000	36.3922
Maximum	**0.0421**	**0.4301**	**0.2763**	**5.4000e-004**	**0.1296**	**0.0205**	**0.1501**	**0.0678**	**0.0191**	**0.0869**	**0.0000**	**47.1898**	**47.1898**	**0.0115**	**0.0000**	**47.4780**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	7.4700e-003	0.0267	0.3010	5.4000e-004	0.1296	8.1000e-004	0.1304	0.0678	8.1000e-004	0.0686	0.0000	47.1898	47.1898	0.0115	0.0000	47.4779
2021	6.0600e-003	0.0190	0.2478	4.2000e-004	5.1700e-003	5.7000e-004	5.7500e-003	1.3700e-003	5.7000e-004	1.9400e-003	0.0000	36.2534	36.2534	5.5500e-003	0.0000	36.3922
Maximum	**7.4700e-003**	**0.0267**	**0.3010**	**5.4000e-004**	**0.1296**	**8.1000e-004**	**0.1304**	**0.0678**	**8.1000e-004**	**0.0686**	**0.0000**	**47.1898**	**47.1898**	**0.0115**	**0.0000**	**47.4779**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**78.48**	**92.69**	**-10.42**	**0.00**	**0.00**	**95.32**	**17.11**	**0.00**	**95.04**	**27.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.2171	0.0255
		Highest	0.2171	0.0255

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.1200e-003	5.5000e-003	0.0165	6.0000e-005	5.7600e-003	5.0000e-005	5.8100e-003	1.5400e-003	5.0000e-005	1.5900e-003	0.0000	5.8356	5.8356	2.8000e-004	0.0000	5.8427
Waste						0.0000	0.0000		0.0000	0.0000	0.6090	0.0000	0.6090	0.0360	0.0000	1.5087
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.3976	0.3976	2.0000e-005	0.0000	0.3990
Total	**1.1200e-003**	**5.5000e-003**	**0.0165**	**6.0000e-005**	**5.7600e-003**	**5.0000e-005**	**5.8100e-003**	**1.5400e-003**	**5.0000e-005**	**1.5900e-003**	**0.6090**	**6.2332**	**6.8422**	**0.0363**	**0.0000**	**7.7504**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.1200e-003	5.5000e-003	0.0165	6.0000e-005	5.7600e-003	5.0000e-005	5.8100e-003	1.5400e-003	5.0000e-005	1.5900e-003	0.0000	5.8356	5.8356	2.8000e-004	0.0000	5.8427
Waste						0.0000	0.0000		0.0000	0.0000	0.6090	0.0000	0.6090	0.0360	0.0000	1.5087
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.3976	0.3976	2.0000e-005	0.0000	0.3990
Total	**1.1200e-003**	**5.5000e-003**	**0.0165**	**6.0000e-005**	**5.7600e-003**	**5.0000e-005**	**5.8100e-003**	**1.5400e-003**	**5.0000e-005**	**1.5900e-003**	**0.6090**	**6.2332**	**6.8422**	**0.0363**	**0.0000**	**7.7504**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2020	10/14/2020	5	10	
2	Grading Access Road	Grading	10/15/2020	11/11/2020	5	20	
3	Building Construction Including Connections	Building Construction	11/12/2020	3/30/2021	5	99	
4	Crane Use to set Units	Building Construction	1/1/2021	1/28/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading Access Road	Excavators	1	8.00	158	0.38
Grading Access Road	Graders	1	8.00	187	0.41
Grading Access Road	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction Including Connections	Generator Sets	1	8.00	84	0.74
Building Construction Including Connections	Rough Terrain Forklifts	1	8.00	100	0.40
Crane Use to set Units	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading Access Road	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction Including Connections	2	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0602	0.0000	0.0602	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0129	0.1344	0.0641	1.2000e-004		6.8800e-003	6.8800e-003		6.3300e-003	6.3300e-003	0.0000	10.2341	10.2341	3.3100e-003	0.0000	10.3168
Total	**0.0129**	**0.1344**	**0.0641**	**1.2000e-004**	**0.0602**	**6.8800e-003**	**0.0671**	**0.0331**	**6.3300e-003**	**0.0394**	**0.0000**	**10.2341**	**10.2341**	**3.3100e-003**	**0.0000**	**10.3168**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9400e-003	1.0000e-005	6.2000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5581	0.5581	2.0000e-005	0.0000	0.5585
Total	**2.6000e-004**	**2.0000e-004**	**1.9400e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.3000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5581**	**0.5581**	**2.0000e-005**	**0.0000**	**0.5585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0602	0.0000	0.0602	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	6.1800e-003	0.0618	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.2340	10.2340	3.3100e-003	0.0000	10.3168
Total	**1.4300e-003**	**6.1800e-003**	**0.0618**	**1.2000e-004**	**0.0602**	**1.9000e-004**	**0.0604**	**0.0331**	**1.9000e-004**	**0.0333**	**0.0000**	**10.2340**	**10.2340**	**3.3100e-003**	**0.0000**	**10.3168**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	1.9400e-003	1.0000e-005	6.2000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5581	0.5581	2.0000e-005	0.0000	0.5585
Total	**2.6000e-004**	**2.0000e-004**	**1.9400e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.3000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5581**	**0.5581**	**2.0000e-005**	**0.0000**	**0.5585**

3.3 Grading Access Road - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0180	0.2007	0.0921	2.0000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	17.8732	17.8732	5.7800e-003	0.0000	18.0177
Total	**0.0180**	**0.2007**	**0.0921**	**2.0000e-004**	**0.0655**	**8.7400e-003**	**0.0743**	**0.0337**	**8.0400e-003**	**0.0417**	**0.0000**	**17.8732**	**17.8732**	**5.7800e-003**	**0.0000**	**18.0177**

3.3 Grading Access Road - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	3.1000e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0000e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8929	0.8929	3.0000e-005	0.0000	0.8936
Total	**4.1000e-004**	**3.2000e-004**	**3.1000e-003**	**1.0000e-005**	**1.0000e-003**	**1.0000e-005**	**1.0000e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8929**	**0.8929**	**3.0000e-005**	**0.0000**	**0.8936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4900e-003	0.0108	0.1073	2.0000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	17.8732	17.8732	5.7800e-003	0.0000	18.0177
Total	**2.4900e-003**	**0.0108**	**0.1073**	**2.0000e-004**	**0.0655**	**3.3000e-004**	**0.0659**	**0.0337**	**3.3000e-004**	**0.0340**	**0.0000**	**17.8732**	**17.8732**	**5.7800e-003**	**0.0000**	**18.0177**

3.3 Grading Access Road - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.2000e-004	3.1000e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0000e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8929	0.8929	3.0000e-005	0.0000	0.8936
Total	**4.1000e-004**	**3.2000e-004**	**3.1000e-003**	**1.0000e-005**	**1.0000e-003**	**1.0000e-005**	**1.0000e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8929**	**0.8929**	**3.0000e-005**	**0.0000**	**0.8936**

3.4 Building Construction Including Connections - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.5900e-003	0.0938	0.1080	1.8000e-004		4.8300e-003	4.8300e-003		4.7300e-003	4.7300e-003	0.0000	15.6225	15.6225	2.3400e-003	0.0000	15.6809
Total	**9.5900e-003**	**0.0938**	**0.1080**	**1.8000e-004**		**4.8300e-003**	**4.8300e-003**		**4.7300e-003**	**4.7300e-003**	**0.0000**	**15.6225**	**15.6225**	**2.3400e-003**	**0.0000**	**15.6809**

3.4 Building Construction Including Connections - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e-004	7.3000e-004	6.9800e-003	2.0000e-005	2.2400e-003	2.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	2.0091	2.0091	6.0000e-005	0.0000	2.0105
Total	**9.3000e-004**	**7.3000e-004**	**6.9800e-003**	**2.0000e-005**	**2.2400e-003**	**2.0000e-005**	**2.2600e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**2.0091**	**2.0091**	**6.0000e-005**	**0.0000**	**2.0105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9500e-003	8.4300e-003	0.1200	1.8000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	15.6225	15.6225	2.3400e-003	0.0000	15.6809
Total	**1.9500e-003**	**8.4300e-003**	**0.1200**	**1.8000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**15.6225**	**15.6225**	**2.3400e-003**	**0.0000**	**15.6809**

3.4 Building Construction Including Connections - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e-004	7.3000e-004	6.9800e-003	2.0000e-005	2.2400e-003	2.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	2.0091	2.0091	6.0000e-005	0.0000	2.0105
Total	**9.3000e-004**	**7.3000e-004**	**6.9800e-003**	**2.0000e-005**	**2.2400e-003**	**2.0000e-005**	**2.2600e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**2.0091**	**2.0091**	**6.0000e-005**	**0.0000**	**2.0105**

3.4 Building Construction Including Connections - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0151	0.1505	0.1883	3.2000e-004		7.2500e-003	7.2500e-003		7.0900e-003	7.0900e-003	0.0000	27.3419	27.3419	3.9900e-003	0.0000	27.4418
Total	**0.0151**	**0.1505**	**0.1883**	**3.2000e-004**		**7.2500e-003**	**7.2500e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**27.3419**	**27.3419**	**3.9900e-003**	**0.0000**	**27.4418**

3.4 Building Construction Including Connections - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	1.1600e-003	0.0114	4.0000e-005	3.9300e-003	3.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.3977	3.3977	9.0000e-005	0.0000	3.4000
Total	**1.5400e-003**	**1.1600e-003**	**0.0114**	**4.0000e-005**	**3.9300e-003**	**3.0000e-005**	**3.9500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.3977**	**3.3977**	**9.0000e-005**	**0.0000**	**3.4000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4100e-003	0.0148	0.2100	3.2000e-004		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	27.3419	27.3419	3.9900e-003	0.0000	27.4417
Total	**3.4100e-003**	**0.0148**	**0.2100**	**3.2000e-004**		**4.5000e-004**	**4.5000e-004**		**4.5000e-004**	**4.5000e-004**	**0.0000**	**27.3419**	**27.3419**	**3.9900e-003**	**0.0000**	**27.4417**

3.4 Building Construction Including Connections - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5400e-003	1.1600e-003	0.0114	4.0000e-005	3.9300e-003	3.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.3977	3.3977	9.0000e-005	0.0000	3.4000
Total	**1.5400e-003**	**1.1600e-003**	**0.0114**	**4.0000e-005**	**3.9300e-003**	**3.0000e-005**	**3.9500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.3977**	**3.3977**	**9.0000e-005**	**0.0000**	**3.4000**

3.5 Crane Use to set Units - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6100e-003	0.0424	0.0174	5.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	4.4352	4.4352	1.4300e-003	0.0000	4.4711
Total	**3.6100e-003**	**0.0424**	**0.0174**	**5.0000e-005**		**1.7200e-003**	**1.7200e-003**		**1.5800e-003**	**1.5800e-003**	**0.0000**	**4.4352**	**4.4352**	**1.4300e-003**	**0.0000**	**4.4711**

3.5 Crane Use to set Units - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.7000e-004	3.6300e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2600e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0786	1.0786	3.0000e-005	0.0000	1.0794
Total	**4.9000e-004**	**3.7000e-004**	**3.6300e-003**	**1.0000e-005**	**1.2500e-003**	**1.0000e-005**	**1.2600e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0786**	**1.0786**	**3.0000e-005**	**0.0000**	**1.0794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2000e-004	2.6900e-003	0.0227	5.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	4.4352	4.4352	1.4300e-003	0.0000	4.4711
Total	**6.2000e-004**	**2.6900e-003**	**0.0227**	**5.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**4.4352**	**4.4352**	**1.4300e-003**	**0.0000**	**4.4711**

3.5 Crane Use to set Units - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.7000e-004	3.6300e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2600e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0786	1.0786	3.0000e-005	0.0000	1.0794
Total	**4.9000e-004**	**3.7000e-004**	**3.6300e-003**	**1.0000e-005**	**1.2500e-003**	**1.0000e-005**	**1.2600e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0786**	**1.0786**	**3.0000e-005**	**0.0000**	**1.0794**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1200e-003	5.5000e-003	0.0165	6.0000e-005	5.7600e-003	5.0000e-005	5.8100e-003	1.5400e-003	5.0000e-005	1.5900e-003	0.0000	5.8356	5.8356	2.8000e-004	0.0000	5.8427
Unmitigated	1.1200e-003	5.5000e-003	0.0165	6.0000e-005	5.7600e-003	5.0000e-005	5.8100e-003	1.5400e-003	5.0000e-005	1.5900e-003	0.0000	5.8356	5.8356	2.8000e-004	0.0000	5.8427

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	15,288	15,288
Total	4.00	0.00	0.00	15,288	15,288

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.3976	2.0000e-005	0.0000	0.3990
Unmitigated	0.3976	2.0000e-005	0.0000	0.3990

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0.1095	0.3976	2.0000e-005	0.0000	0.3990
Total		**0.3976**	**2.0000e-005**	**0.0000**	**0.3990**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0.1095	0.3976	2.0000e-005	0.0000	0.3990
Total		**0.3976**	**2.0000e-005**	**0.0000**	**0.3990**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.6090	0.0360	0.0000	1.5087
Unmitigated	0.6090	0.0360	0.0000	1.5087

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	3	0.6090	0.0360	0.0000	1.5087
Total		**0.6090**	**0.0360**	**0.0000**	**1.5087**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	3	0.6090	0.0360	0.0000	1.5087
Total		**0.6090**	**0.0360**	**0.0000**	**1.5087**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Permit Number: _____

COUNTY OF SAN DIEGO

LAND USE AND ENVIRONMENT GROUP

Department of Planning & Development Services

Appendix A: Final Climate Action Plan Consistency Review Checklist

Introduction

The County of San Diego (County) Climate Action Plan (CAP), adopted by the Board of Supervisors on February 14, 2018, outlines actions that the County will undertake to meet its greenhouse gas (GHG) emissions reduction targets. Implementation of the CAP will require that new development projects incorporate more sustainable design standards and implement applicable reduction measures consistent with the CAP. To help plan and design projects consistent with the CAP, and to assist County staff in implementing the CAP and determining the consistency of proposed projects with the CAP during development review, the County has prepared a CAP Consistency Review Checklist (Checklist). This Checklist, in conjunction with the CAP, provides a streamlined review process for proposed discretionary projects that require environmental review pursuant to the California Environmental Quality Act (CEQA). Please refer to the County's Guidelines for Determining Significance for Climate Change (Guidelines) for more information on GHG emissions, climate change impact requirements, thresholds of significance, and compliance with CEQA Guidelines Section 15183.5.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives. This Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist represents one implementation tool in the County's overall strategy to implement the CAP. Implementation of measures that do not apply to new development projects will occur through the implementation mechanisms identified in Chapter 5 of the CAP. Implementation of applicable reduction measures in new development projects will help the County achieve incremental reductions towards its targets, with additional reductions occurring through County initiatives and measures related to existing development that are implemented outside of the Checklist process.

The Checklist follows a two-step process to determine if projects are consistent with the CAP and whether they may have a significant cumulative impact under the County's adopted GHG thresholds of significance. The Checklist first assesses a project's consistency with the growth projections and land use assumptions that formed the basis of CAP emissions projections. If a project is consistent with the projections and land use assumptions in the CAP, its associated growth in terms of GHG emissions would have been accounted for in the CAP's projections and project implementation of the CAP reduction measures will contribute towards reducing the County's emissions and meeting the County's reduction targets. Projects that include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project

when compared to existing designation, would also be within the projections assumed in the CAP. Projects responding in the affirmative to Step 1 questions can move forward to Step 2 of the Checklist. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions as described in the Guidelines. Step 2 of the Checklist contains the CAP GHG reduction measures that projects are required to implement to ensure compliance with the CAP. Implementation of these measures would ensure that new development is consistent with relevant CAP strategies and measures and will contribute towards achieving the identified GHG reduction targets. Projects that are consistent with the CAP, as determined using this Checklist, may rely on the CAP for the cumulative impacts analysis of GHG emissions under CEQA.

A project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable if it is determined to be consistent with the CAP. As specified in the CEQA Guidelines, the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are "cumulatively considerable" (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][4]). Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist may have a cumulatively considerable contribution to a significant cumulative impact and would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

Checklist Applicability

This Checklist only applies to development projects that require discretionary review and are subject to environmental review (i.e., not statutorily or categorically exempt projects) pursuant to CEQA. Projects that are limited to ministerial review and approval (e.g., only building permits) would not be subject to the Checklist. The CAP contains other measures that, when implemented, would apply broadly to all ministerial and discretionary projects. These measures are included for discretionary projects in this Checklist, but could also apply more broadly once the County takes action to codify specific requirements or standards.

Checklist Procedures

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist in subsequent pages.

1. The County's Department of Planning & Development Services (PDS) reviews development applications and makes determinations regarding environmental review requirements under CEQA. Procedures for CEQA can be found on the County's Process Guidance & Regulations/Statutes Homepage. The Director of PDS will determine whether environmental review is required, and if so, whether completion of the CAP Checklist is required for a proposed project or whether a separate project-level GHG analysis is required.

2. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval.

3. The project must provide substantial evidence that demonstrates how the proposed project will implement each applicable Checklist requirement described herein to the satisfaction of the Director of PDS.

4. If a question in the Checklist is deemed not applicable (N/A) to a project, substantial evidence shall be provided to the satisfaction of the Director of PDS demonstrating why the Checklist item is not applicable. Feasibility of reduction measures for new projects was assessed in development of the

CAP and measures determined to be feasible were incorporated into the Checklist. Therefore, it is expected that projects would have the ability to comply with all applicable Checklist measures.

5. Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project and may be required to prepare an Environmental Impact Report (EIR). Guidance for project-specific GHG Technical Reports is outlined in the Report Format and Content Requirements for Climate Change document, provided under separate cover. The Report Format and Content Requirements document provides guidance on the outline and content of GHG analyses for discretionary projects processed by PDS that cannot show compliance with the CAP Checklist.

Checklist Updates

The Guidelines and Checklist may be administratively updated by the County from time to time to comply with amendments to State laws or court directives, or to remove measures that may become mandatory through future updates to State or local codes. Administrative revisions to the Guidelines and Checklist will be limited to changes that do not trigger a subsequent EIR or a supplement to the SEIR for the CAP pursuant to CEQA Guidelines Section 15162. Administrative revisions, as described above, will not require approval by the Board of Supervisors (Board). All other changes to the Guidelines and Checklist require Board approval.

Comprehensive updates to the Guidelines and Checklist will be coordinated with each CAP update (i.e., every five years beginning in 2025) and would require Board approval. Future updates of the CAP, Guidelines, and Checklist shall comply with CEQA.

Application Information

Contact Information

Project No. and Name: Valley Center Storage Project

Property Address and APN: 29523 Valley Center Road, Valley Center

Applicant Name and Co.: Mark Turner; Valley Center ESS, LLC

Contact Phone: 916-835-8119 Contact Email: MTurner@terra-gen.com

Was a consultant retained to complete this checklist? ■ Yes ☐ No
If Yes, complete the following:

Consultant Name: Jeremy Louden Contact Phone: 760-473-1253

Company Name: Ldn Consulting Contact Email: jlouden@ldnconsulting.net

Project Information

1. What is the size of the project site (acres [gross and net])? gross: 8.93 acres

2. Identify all applicable proposed land uses (indicate square footage [gross and net]):

   ☐ Residential (indicate # of single-family dwelling units): _____

   ☐ Residential (indicate # of multi-family dwelling units): _____

   ☐ Commercial (indicate total square footage [gross and net]): _____

   ☐ Industrial (indicate total square footage [gross and net]): _____

   ☐ Agricultural (indicate total acreage [gross and net]): _____

   ■ Other (describe): See Below

3. Provide a description of the project proposed. This description should match the project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

The Project would construct up to 140 (MW) of battery energy storage system (BESS) on parcels designated for M52 Limited Impact Industrial uses in Valley Center. Off-site improvements to connect the BESS to the SDG&E 69-kV substation 0.3 miles to the north will also be required. The Project site is located within the northeastern portion of the unincorporated community of Valley Center in northwestern San Diego County (County).

CAP Consistency Checklist Questions

Step 1: Land Use Consistency

For projects that are subject to CAP consistency review, the first step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the County to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
1. Is the proposed project consistent with the existing General Plan regional category, land use designations, and zoning designations? If **"Yes,"** provide substantiation below and then proceed to Step 2 (CAP Measures Consistency) of the Checklist. If **"No,"** proceed to question 2 below.	☒	☐
Project Detail: Please substantiate how the project satisfies question 1. The Project site is subject to M52 Limited Impact Industrial zoning regulations which are intended to create and preserve areas where manufacturing and industrial uses. Uses allowed under the M52 zoning designation include Minor Impact Utilities defined as public utilities which have a local impact on surrounding properties and are necessary to provide essential services (typical uses are electrical and gas distribution substations) and Major Impact Service and Utilities are defined as public services and utilities which have substantial impact.		
2. Does the project include a land use element and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations? If **"Yes,"** the project must provide estimated project GHG emissions under both existing and proposed designation(s) for comparison to substantiate the response and proceed to Step 2 (CAP Measures Consistency) of the Checklist. If **"No,"** (i.e., the project proposes an increase in density or intensity above that which is allowed under existing General Plan designations and consequently would not result in an equivalent or less GHG-intensive project when compared to the existing designations), the project must prepare a separate, more detailed project-level GHG analysis. As outlined in the County's Guidelines for Determining Significance for Climate Change and Report Format and Content Requirements for Climate Change, this analysis must demonstrate how the project would offset the increase in GHG emissions over the existing designations or baseline conditions. The project must also incorporate each of the CAP measures identified in Step 2 to mitigate cumulative GHG emissions impacts. Proceed and complete a separate project-specific GHG analysis and Step 2 of the Checklist. Refer to Section 4 of the County's Guidelines for procedures on analyzing General Plan Amendments.	☐	☐
Project Detail: Please substantiate how the project satisfies question 2.		

Step 2: CAP Measures Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable measures of the CAP. Each checklist item is associated with a specific GHG reduction measure(s) in the County CAP.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Step 2A: Project Operations (All projects with an operational component must fill out this portion of the Checklist)				
Reducing Vehicle Miles Traveled				
1a. Reducing Vehicle Miles Traveled <u>Non-Residential:</u> For non-residential projects with anticipated tenant-occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated. VMT reduction actions though TDM may include, but are not limited to: ☐ Telecommuting ☐ Car Sharing ☐ Shuttle Service ☐ Carpools ☐ Vanpools ☐ Bicycle Parking Facilities ☐ Transit Subsidies Shared and reduced parking strategies may include, but are not limited to:[1] ☐ Shared parking facilities ☐ Carpool/vanpool-only parking spaces ☐ Shuttle facilities ☐ Electric Vehicle-only parking spaces The project may incorporate the measures listed above, and propose additional trip reduction measures, as long as a 15% reduction in emissions from commute VMT can be demonstrated through substantial evidence. Check "N/A" if the project is a residential project or if the project would not accommodate more than 25 tenant-occupants.	T-2.2 and T-2.4	☐	☐	☒
1b. Project Detail: Please substantiate how the project satisfies question 1a. Project will have fewer than 25 tenant-occupants.				

[1] Reduction actions and strategies under 1a may be used to achieve a 10% reduction in emissions from commute VMT under 2a

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Shared and Reduced Parking				
2a. Shared and Reduced Parking Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT? Shared and reduced parking strategies may include, but are not limited to: ☐ Shared parking facilities ☐ Carpool/vanpool-only parking spaces ☐ Shuttle facilities ☐ Electric Vehicle-only parking spaces Check "N/A" if the project is a residential project or if the project would accommodate 25 or more tenant-occupants.	T-2.4	☐	☐	☒

2b. Project Detail:
Please substantiate how the project satisfies question 2a.

The Project would be operated remotely; however would require periodic site visits for maintenance activities necessary for Project operations.
On-site site visits would include up to a four-person crew accessing the site twice monthly.
Therefore, the Project will not have have daily occupants or require any designed parking.

Water Heating Systems				
3a. Electric or Alternatively-Fueled Water Heating Systems Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternatively-fueled water heating system(s)? Please check which types of system(s) will be installed: ☐ Solar thermal water heater ☐ Tankless electric water heater ☐ Storage electric water heaters ☐ Electric heat pump water heater ☐ Tankless gas water heater ☐ Other Check "N/A" if the project does not contain any residential buildings.	E-1.2	☐	☐	☒

3b. Project Detail:
Please substantiate how the project satisfies question 3a.

Project does not propose or consist of any residential uses

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Water-Efficient Appliances and Plumbing Fixtures				
4a. Water Efficient Appliances and Plumbing Fixtures Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs[2]? ☐ Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi[3]. ☐ Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit. Check "N/A" if the project is a non-residential project.	W-1.1	☐	☐	☒
4b. Project Detail: Please substantiate how the project satisfies question 4a. Project does not propose or consist of any residential uses				
Rain Barrel Installations				
5a. Rain Barrel Installations Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area? Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.	W-2.1	☐	☐	☒
5b. Project Detail: Please substantiate how the project satisfies question 5a. Project does not propose or consist of any residential uses				

[2] CALGreen Tier 1 residential voluntary measure A4.303 of the California Green Building Standards Code.
[3] Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Reduce Outdoor Water Use				
6a. Reduce Outdoor Water Use Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance[4] and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use? Non-Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use? Check "N/A" if the project does not propose any landscaping, or if the aggregate landscaped area is between 500 – 2,499 square feet and elects to comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance.	W-1.2	☐	☐	☒
6b. Project Detail: Please substantiate how the project satisfies question 6a. The Project does not propose landscaping.				
Agricultural and Farming Operations[5]				
7a. Agricultural and Farming Equipment Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	A-1.1	☐	☐	☒
7b. Project Detail: Please substantiate how the project satisfies question 7a. The Project does not propose any agricultural or farming operations.				

[4] http://www.sandiegocounty.gov/content/dam/sdc/cob/ordinances/ord10427.pdf.
[5] Existing agricultural operations would not be subject to questions 7 and 8 of the Checklist, unless a proposed expansion is subject to discretionary review and requires environmental review pursuant to CEQA.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
8a. Electric Irrigation Pumps Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	A-1.2	☐	☐	☒

8b. Project Detail:
Please substantiate how the project satisfies question 8a.
The Project does not propose any agricultural or farming operations.

Tree Planting				
9a. Tree Planting <u>Residential:</u> For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed? Check "N/A" if the project is a non-residential project.	A-2.1	☐	☐	☒

9b. Project Detail:
Please substantiate how the project satisfies question 9a.
Project does not propose or consist of any residential uses.