DOCKETED	
Docket Number:	23-OPT-02
Project Title:	Darden Clean Energy Project
TN #:	260662
Document Title:	CEC Supplemental Data Request Response Set 1
Description:	Provides the Applicant's first and final response set to supplemental data requests received from the CEC. Responses address data requests related to Air Quality, Biological Resources, Climate Change/Greenhouse Gas Emissions, Hazardous Materials Handling, Project Description, Public Health, Water Resources, and Worker Safety.
Filer:	Megan Knight
Organization:	Rincon Consultants, Inc.
Submitter Role:	Applicant Consultant
Submission Date:	12/13/2024 4:44:37 PM
Docketed Date:	12/13/2024

Darden Clean Energy Project (23-OPT-02)

CEC Supplemental Data Request Response Set #1

prepared by

IP Darden I, LLC and Affiliates
c/o Intersect Power, LLC
9450 SW Gemini Drive, PMB #68743
Beaverton, Oregon 97008

prepared with the assistance of

Rincon Consultants, Inc.
7080 North Whitney Avenue, Suite 101
Fresno, California 93720

December 2024

RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

Tables

Figures

Appendices

1 Introduction

On September 19, 2024, IP Darden I, LLC and Affiliates (Applicant) received a Determination of Complete Application from the California Energy Commission (CEC) for the Darden Clean Energy Project (Project) (23-OPT-02) in response to the Applicant's Opt-In Application, initially received by CEC staff on November 9, 2023. On November 13, 2024, the Applicant received a supplemental data request for the Project related to removal of the green hydrogen component from the Project, the addition of incidental take for western burrowing owl, and comments received in response to the Notice of Preparation of the Draft Environmental Impact Report for the Project.

The following document provides the Applicant's response to the Supplemental Data Requests received from the CEC, pursuant to the initial Determination of Complete Application. Table 1 lists the Data Requests for which a response is provided in this Supplemental Response Set #1. Responses are provided herein to all supplemental data requests and no additional responses will follow.

Table 1 Data Responses Included in Supplemental Response Set #1

Data Request Resources Area	Data Request Number
Air Quality	SUP DR AQ-1 through SUP DR AQ-7
Biological Resources	SUP DR BIO-1 through SUP DR BIO-6
Climate Change/ Greenhouse Gas Emissions	SUP DR GHG-1 through SUP DR GHG-4
Hazardous Materials	SUP DR HAZ-1 through SUP DR HAZ-2
Project Description	SUP DR PD-1
Public Health	SUP DR PH-1
Water Resources	SUP DR WATER-1 through SUP DR WATER-4
Worker Safety	SUP DR WS-1

The responses are grouped by individual discipline or topic area and are presented in the same order and with the same numbering provided by the CEC. New or revised graphics, tables, or attachments are provided throughout and as appendices to this document. The responses included in this document are considered complete responses to the corresponding Data Requests.

2 Air Quality

2.1 Data Request SUP DR AQ-1 through SUP DR AQ-7

2.1.1 Data Request SUP DR AQ-1

SUP DR AQ-1: Please provide an updated Figure 1 of Data Request Response Set 3 (TN 255907).

Response: The updated Figure 1 of Data Request Response Set 3 is provided as Figure 1 below. The updated figure depicts the removal of the diesel emergency generators (gensets) due to removal of the green hydrogen component, and shows the location of the up to three liquid propone gas (LPG) gensets.

2.1.2 Data Request SUP DR AQ-2

SUP DR AQ-2: Please confirm that all the emission rates in Data Request Response Set 3 (TN 255907) would remain the same with the exception of the deleted larger green hydrogen facility gensets. If not, please provide the updated emission rates.

Response: The emission rates in Data Request Response Set 3 would remain the same, with the exception of the deleted larger green hydrogen facility diesel emergency gensets and the addition of one LPG genset. However, the Project construction emissions are anticipated to decrease, as the green hydrogen facility will no longer be constructed. For the purposes of a conservative analysis, the air quality construction emissions have not been revised to account for the removal of the green hydrogen facility.

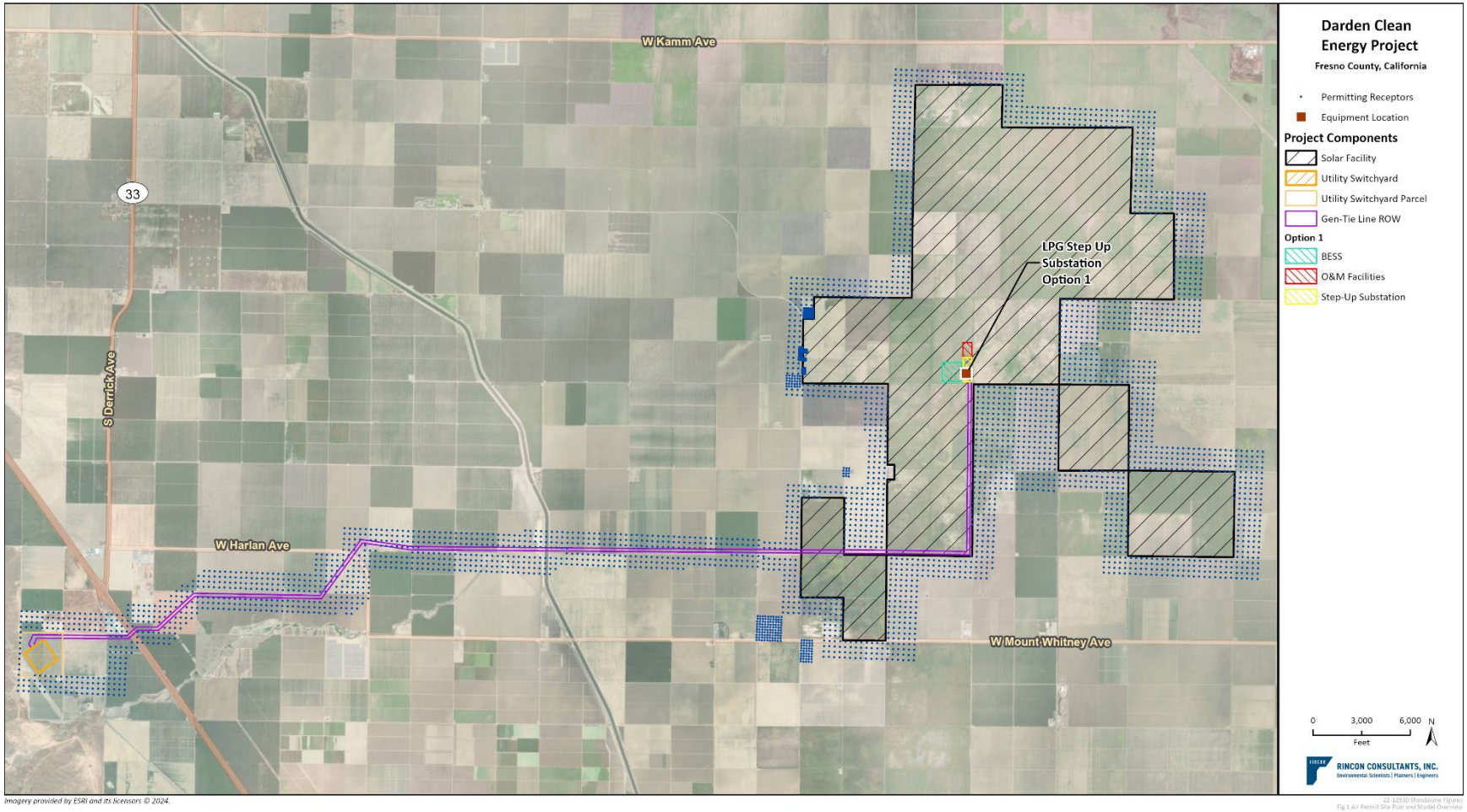
The changes to operational criteria pollutant and greenhouse gas emissions associated with the deleted green hydrogen facility gensets and addition of the new LPG genset are provided in Appendix A. Emissions of NOx are reduced by 91% on an hourly basis and 83% on an annual basis; VOC emissions are reduced by 31% on an hourly basis and 20% on an annual basis; CO emissions are reduced by 87% on an hourly basis and 76% on an annual basis; and PM emissions reduced by nearly 100%. Please refer to Appendix A for more information.

2.1.3 Data Request SUP DR AQ-3

SUP DR AQ-3: Please indicate whether the remaining gensets would otherwise still be required to get a permit from the SJVAPCD, but for the CEC's exclusive jurisdiction. If so, please provide the information necessary to obtain relevant permits and confirmation that this information has been submitted to the SJVAPCD.

Response: On November 25, 2024, the San Joaquin Valley Air Pollution District (SJVAPCD) confirmed that with removal of the diesel generators from the Project, air permits would still be required for the LPG gensets, but for the CEC's exclusive jurisdiction. The Applicant provided a supplemental permit application form for the additional LPG genset and a copy of the specification sheets for the LPG generator to SJVAPCD on December 3, 2024, which is included as Appendix B to this response set.

Figure 1 Updated Emergency Backup Generator Modeling Locations (Figure 1 Data Response Set 3)



2.1.4 Data Request SUP DR AQ-4

SUP DR AQ-4: Please provide clean and redlined versions of an updated Section 5.7 of the application and associated appendices, including but not limited to, updates to the following Air Quality Tables included in Section 5.7: Table 5.7-6, Table 5.7-7, Table 5.7-8, Table 5.7-9, Table 5.7-10, Table 5.7-12, and Table 5.7-13.

Response: Clean and redline versions of Section 5.7 of the Opt-In Application are provided as Appendix C to this response set.

2.1.5 Data Request SUP DR AQ-5

SUP DR AQ-5: Please confirm the number of planned backup generators and provide their specifications and locations.

Response: With removal of the green hydrogen facility from the Project, the emergency diesel generators previously analyzed are no longer needed. The Project will include up to three LPG emergency generator sets, which will be located at the Project's onsite substation. The analysis previously assumed two LPG generator sets. The three (3) backup LPG generators will be 150 kilowatt Power Solutions Int'l (PSI) 8800CAC (LPG) Emergency Generator Sets. The specifications for the LPG emergency generator sets were provided as part of Data Response Set 3 and are included again as Appendix B for reference.

The location UTM coordinates were previously provided for the LPG gensets and are not expected to change. The third LPG genset will be located in the same approximate area as the other two gensets at the Option 1 substation. The representative UTM coordinates for Option 1 are X = 749650, Y = 4040200, as provided in Appendix A.

2.1.6 Data Request SUP DR AQ-6

SUP DR AQ-6: Please provide updated CalEEMod results for both the construction and operation phases or justify why an updated analysis is not needed.

Response: Updated CalEEMod results for construction and operation are not needed, as construction and operational emissions will go down with the removal of the green hydrogen facility and the associated diesel gensets. Therefore, the results presented in Section 5.7 and associated appendices are inherently conservative. The reductions to operational emissions associated with the removal of the diesel gensets (and addition of one more LPG genset) are included in Appendix A and demonstrate a large reduction in operational emissions. Removal of the green hydrogen facility would reduce construction activities and thus total associated construction emissions. However, daily emissions would only be reduced for construction activities that overlap with the originally proposed hydrogen generator. Similarly, the removal would also reduce area emissions associated with that component of the Project. Consequently, the emissions presented in the study are inherently conservative and an update to CalEEMod is not needed.

2.1.7 Data Request SUP DR AQ-7

SUP DR AQ-7: Please provide updated AERMOD results for both the construction and operation phases or justify why an updated analysis is not needed.

Response: Updated AERMOD modeling for construction and operation is not needed. Construction and operational emissions and associated air dispersion modeling output concentrations will go down with the removal of the green hydrogen facility and the associated gensets. Construction emissions will be reduced with the removal of the green hydrogen facility component of the Project and operational emissions will be greatly reduced with the removal of the diesel gensets and hydrogen facility, as discussed in SUP DR AQ-2 and supported with materials in Appendices A, C and D.

The air dispersion modeling results are inherently conservative. The changes to the Project will not have an impact on the CAAQS or NAAQS, as emissions and concentrations will be reduced due to the Project changes.

3 Biological Resources

3.1 Data Request SUP DR BIO-1 through SUP DR BIO-6

3.1.1 Data Request SUP DR BIO-1

SUP DR BIO-1: Please update and resubmit Table 2 submitted in response to REV 1 DR BIO-1, included as part of Data Request Response, Set 6 (TN 258571), to reflect the current temporary and permanent impacts by project component and land cover type, duration (temporary and permanent), and size (acres). Please clarify the total acres for the solar facility, BESS, and substation (for both Option 1 and Option 2 separately) as well as the gen tie corridor and utility switchyard. Please ensure the expanded area for the switchyard is fully described and describe any additional changes to the existing setting (e.g., land cover type).

Response: Table 2 below provides an update of the previously submitted Table 2 from CEC Data Request Response Set 6 and reflects the removal of the green hydrogen component from the Project (including Green Hydrogen Facility Options 1 and 2 and the Alternate Green Hydrogen Facility) as well as removal of the Option 2 components including O&M Facilities, BESS, and Step-Up Substation. Acreages for the remaining O&M Facilities, BESS, and Step-Up Substation are identified in the table.

The Utility Switchyard footprint will permanently impact up to 50 acres. Based on existing landowner agreements, it is assumed all of the existing almond orchard will be removed on that parcel. Temporarily impacted areas where trees are removed will be revegetated in accordance with the Project's Vegetation Management Plan.

Table 2 Impacts by Project Component and Land Cover

Project Feature	2024 Land Cover Type (Environmental Baseline)	Acreage within Project Site	Permanent Impacts (acre)	Temporary Impacts (acre)
PV Development Footprint	**Total**	**9,049**	**245***	**8,798**
	Non-active agriculture: tilled/barren	9,043	245	8,798
	Eucalyptus grove	6	–	–
O&M Facilities	**Total**	**6**	**6**	–
	Non-active agriculture: tilled/barren	6	6	–
Battery Storage (BESS)	**Total**	**35**	**35**	–
	Non-active agriculture: tilled/barren	35	35	–
Step-Up Substation	**Total**	**20**	**20**	–
	Non-active agriculture: tilled/barren	20	20	–
Utility Switchyard	**Total**	**159**	**50**	**109**
	Active agriculture: almond orchard	159	50	109

Project Feature	2024 Land Cover Type (Environmental Baseline)	Acreage within Project Site	Permanent Impacts (acre)	Temporary Impacts (acre)
Gen-tie Corridor (excludes overlapping areas within the PV footprint and utility switchyard parcel)	**Total**	**235**	**2****	**18**
	Non-active agriculture:			
	Ruderal	71	<1	4.8
	Tilled/barren	5	<1	0.4
	Active agriculture:			
	Tomato fields	37	<1	3
	Onion fields	12	<1	1
	Corn fields	22	<1	1.8
	Almond orchards	56	<1	4.5
	Pistachio orchard	13	<1	1.1
	Planting preparation	12	<1	1
	Developed	6	–	–
	Open Water	1	–	–
Total Impacts	PV, O&M, BESS, Utility Switchyard, Gen-tie (Option 1)		**358**	**8,925**

*Panel racking piles, inverter-transformer stations, and roads within the PV Development Footprint. Each pile would be approximately 6x9 inches; approximately 452,000 piles would be required for a total of 24,408,000 square inches or 3.9 acres. Each inverter-transformer station would be approximately 40x25 feet; approximately 276 inverter-transformer stations would be required for a total of 276,000 square feet or 6.34 acres. There would be approximately 488,000 linear feet of roads (20- to 24-foot width) totaling 235 acres. Total permanent impact in the PV Development Footprint would be 245.2 acres.

**Permanent impacts within the gen-tie corridor are based on a 0.05-acre disturbance footprint for up to 40 H-frame poles.

3.1.2 Data Request SUP DR BIO-2

SUP DR BIO-2: Please describe what, if any, type of project component is proposed to occupy the area in Option 1 and 2 where the green hydrogen production facility was previously proposed. Confirm if the Alternate Green Hydrogen Site would be left undeveloped.

Response: Additional PV panels would be installed in the prior footprints of the Green Hydrogen Facility Options 1 and 2. The Alternate Green Hydrogen Site would remain undeveloped. In addition, PV panels would also now occupy the prior footprints of the Option 2 O&M Facilities, BESS, and Step-Up Substation, which were recently removed from the Project. These updates are reflected in Table 2, above (refer to response to Data Request SUP DR BIO-1). See the response to Data Request SUP HAZ-2 for an updated Project layout.

3.1.3 Data Request SUP DR BIO-3

SUP DR BIO-3: Please update Appendix C to Data Request Response Set 4 (TN 256296), including all relevant tables, and any other biological resources management plan to reflect the changes to the project description, including removal of the green hydrogen facility and update the acres of impacts by project component.

Response: Appendix B (Burrowing Owl Management Plan), Appendix C (PV and Gen-tie Biological Resources Management Plan), and Appendix D (Utility Switchyard Biological Resources Management Plan) to Data Request Response Set 4 have been updated to reflect the removal of the green hydrogen facility and the Option 2 O&M Facilities, BESS, and Step-Up Substation. In addition, the Burrowing Owl Management Plan has been updated to reflect the current status of the burrowing owl as a candidate for listing under the California Endangered Species Act; the Burrowing

Owl Management Plan was also updated to incorporate relevant information from the Large-Scale Solar Association Burrowing Owl Conservation Strategy. The updated Burrowing Owl Management Plan, PV and Gen-tie Biological Resources Management Plan, and Utility Switchyard Biological Resources Management Plan are provided as Appendix E, Appendix F, and Appendix G to this response set, respectively.

3.1.4 Data Request SUP DR BIO-4

SUP DR BIO-4: Appendix D to Data Request Response Set 4 (TN 256296) contains the "Utility Switchyard and Alternate Green Hydrogen Site Biological Resources Management Plan" in response to DR BIO-7. Please revise this plan to reflect the removal of the green hydrogen production facility and update all tables and figures – including Table 1. Please clarify if the mitigation measures included in the plan should incorporate the Standard PG&E Construction Measures that were included as part of responses to DR TSD-1 (TN 256296) for the PG&E downstream network upgrades.

Response: Appendix D to Data Request Response Set 4 has been updated to reflect the removal of the green hydrogen production facility, as well as the Option 2 O&M Facilities, BESS, and Step-Up Substation, and renamed to “Utility Switchyard Biological Resources Management Plan.” Standard PG&E Construction Measures are not applicable to construction of the utility switchyard since construction will be undertaken by the Applicant, not PG&E. The updated Utility Switchyard Biological Resources Management Plan is provided as Appendix G to this response set.

3.1.5 Data Request SUP DR BIO-5

SUP DR BIO-5: The updated shapefiles submitted via Kiteworks on October 11, 2024, display the utility switchyard as 35.34 acres not 50 acres as described in the updated Project Description, Section 2.2.4.1 (TN 259510), or the 45 acres described in Data Request Response, Set 6 (TN 258571). Please submit updated shapefiles that include all project changes (e.g. increased size of utility switchyard from 40 to 50 acres).

Response: Updated shapefiles were submitted via Kiteworks on December 13, 2024.

3.1.6 Data Request SUP DR BIO-6

SUP DR BIO-6: If requesting take authorization for western burrowing owl, and pursuant to California Code of Regulations, title 20, section 1877, Contents of an Opt-in Application, please provide the items required in California Code of Regulations, Title 14, section 783.2(a)(1)-(a)(10). They are the 13 listed items on the CDFW website at: https://wildlife.ca.gov/Conservation/CESA/Permitting/Incidental-Take-Permits. Some of this information may have already been provided previously but please resubmit in one package identifying these items specific to burrowing owl.

Please note that staff and CDFW prefer a standalone application document(s) such as what was already provided for Swainson’s hawk. Please provide a clean and a redline strikeout version of the take authorization form for Swainson's hawk included as Appendix U in the Opt-in Application (TN 252929), as well as TN 253060-1 through TN 253060-3 with the request for incidental take authorization for burrowing owl added.

Response: The take authorization form for Swainson’s hawk has been updated to include the request for incidental take authorization for burrowing owl. All updates are indicated in underline or

strikethrough in the document. TN 253060-1 through TN 253060-3 are included as attachments to the revised take authorization form. These documents were submitted separately to the docket on December 13, 2024.

Additional Information:

Nitrogen deposition modeling was performed for the emergency backup diesel and LPG generators in response to DR BIO-20 of Data Response Set 4. The Project has since been updated to remove the green hydrogen facility, which includes removal of all of the emergency backup diesel generators. In addition, the Project has since added a third LPG generator, as discussed in response to SUP DR AQ-5 above. As demonstrated in Appendix A of this response set, these changes would result in a reduction of approximately 83 percent of emissions of oxides of nitrogen (NOx) and would result in a similar reduction in atmospherically derived nitrogen (ADN). Therefore, nitrogen deposition levels would be considerably less than those analyzed in nitrogen deposition modeling previously provided and impacts would continue to remain below critical thresholds associated with significant impacts to non-native grassland, dune or riparian vegetation communities in the vicinity of the Project site or special-status species that may occur within the vegetation communities. Therefore, operation of the Project's emergency LPG backup generators would result in less than significant impacts to natural vegetation communities and special-status species within 6 miles of equipment operation.

4 Climate Change/Greenhouse Gas Emissions

4.1 Data Request SUP DR GHG-1 through SUP DR GHG-4

4.1.1 Data Request SUP DR GHG-1

SUP DR GHG-1: Please update the Annual GHG Emissions to reflect the removal of the green hydrogen facility and submit redline versions of Appendix N, Volume 1, including but not limited to, an updated Table 19, included on page 65 of the Air Quality and Greenhouse Gas Emission Study (TN 253031-1).

Response: The Air Quality and Greenhouse Gas Emissions Study (Appendix N of the Opt-In Application) with relevant appendices has been updated to reflect annual GHG emissions with removal of the green hydrogen facility and is provided as Appendix D to this response set. The updates provide both an original set of summary tables and a revised set of summary tables that highlight the values that changed with the removal of the green hydrogen facility and the update to the displaced energy information. Appendix D1 to this response set includes an update to Appendix N-2 Calculations of the Air Quality and Greenhouse Gas Emissions Study (Appendix N of the Opt-In Application) and updates GHG emissions to remove the green hydrogen facility from the emissions quantification for GHGs only. The summary tables shown on pages 73-81 of Appendix D1 have been updated to show this change; the remainder of the analysis and appendices still include the original emissions in order to be consistent with the Air Quality and Greenhouse Gas Emissions section of the Opt-In Application. Appendix D1 has been additionally updated to include the 2023 California Power Mix as well as the increase in renewable energy sources anticipated between 2023 and the end of Project life and assumes that California meets the 2045 100 percent renewable requirement. Pages 118-119 of Appendix D1 provide the updated displaced emissions quantification (see also the response to Data Request SUP DR GHG-2, below). Other appendices included in Appendix N of the Opt-In Application remain the same and are not included with this response set.

An updated Table 19, showing original and revised values, is provided as Appendix H to this response set for reference.

4.1.2 Data Request SUP DR GHG-2

SUP DR GHG-2: Please update the table titled "Displaced Energy Production during 35-year Project Life", included on page 201 of the Air Quality and Greenhouse Gas Emissions Study (TN 253031-1).

Response: The “Displaced Energy Production Table during 35-year Project Life” in the appendices of the Air Quality and GHG Emissions Study (Appendix N of the Opt-In Application) has been updated to include the 2023 CA Power Mix as well as to account for the increase in renewable sources over the 35-year project lifetime. The updated Appendix N is provided as Appendix D to this response set. Based on the 2023 Power Mix, approximately 7,248 MT CO2e is associated with each percentage of non-renewable energy included in the CA Power Mix. This value considers the type of non-renewable energy and the emissions per type. As it is unknown how the non-renewable energy systems will be removed from the CA Power Mix, the 7,248 MT CO2e per percentage was used to

estimate the annual reduction in offset based on the increase in renewable energy per year needed to meet the 2045 goal of 100 percent renewable energy production within California. The original and revised “Displaced Energy Production During 35-year Project” tables are provided as Appendix I to this response set for ease of comparison. The original analysis did not take into account offsets that would occur from the production of green hydrogen, i.e., reduction of gasoline consumption in favor of hydrogen fuels. Therefore, the only adjustments were based on updating the CA Power Mix and accounting for meeting the 2045 100 percent renewable energy goals for California.

4.1.3 Data Request SUP DR GHG-3

SUP DR GHG-3: In the table titled "Displaced Energy Production during 35-year Project Life", included on page 201 of the Air Quality and Greenhouse Gas Emissions Study (TN 253031-1), please replace the 2021 CA Power Mix in the table with the updated 2023 CA Power Mix available at: https://www.energy.ca.gov/datareports/energy-almanac/california-electricity-data/2023-total-system-electricgeneration, and give an expected power mix over the 35-year project life, with the consideration of the requirements in Senate Bill 32 (California Global Warming Solutions Act of 2006) and Assembly Bill 1279 (The California Climate Crisis Act [2021-2022]).

Response: The displaced energy production has been updated as detailed in the response to SUP DR GHG-2 above.

4.1.4 Data Request SUP DR GHG-4

SUP DR GHG-4: Please include assumptions that would lead to the degradation of the battery, over the 35-year project life span, leading to the loss of capacity and reduced battery performance. Please describe the type of lithium-ion battery that is expected to be used (LFP or NMC). Include the amount of charge cycles that would be typical for the battery system.

Response: Battery degradation is the gradual reduction in a battery's capacity to store and deliver energy over time. This occurs due to factors such as chemical reactions, exposure to temperatures, repeated charge and discharge cycles, and natural aging. As a battery degrades, its efficiency and capacity decrease, resulting in a decline in performance.

The Tesla Megapack 2XL, which has LFP batteries, will be used for the Darden Project.

As described in response to DR GHG-8 in Data Response Set 3, the BESS would have one full charge cycle per day. The charge cycle would be for the full 4,600 MWh for the life of the Project. Although the batteries would degrade over time, augmentation of the overall battery storage system (described in REV 1 DR HAZ-2 in Data Response Set 6) would maintain the full 4,600 MWh.

5 Hazardous Materials Handling

5.1 Data Request SUP DR HAZ-1 through SUP DR HAZ-2

5.1.1 Data Request SUP DR HAZ-1

SUP DR HAZ-1: Please update Tables 5-9-1, 5-9-2, and 5-9-3 to reflect the changes in the hazardous materials from removal of the green hydrogen facility from the project.

Response: Tables 5.9-1, 5.9-2, and 5.9-3 have been updated to reflect the changes in the hazardous materials from removal of the green hydrogen facility from the Project. The updated tables are provided below.

5.1.2 Data Request SUP DR HAZ-2

SUP DR HAZ-2: Please submit updated project design drawings at the same scale as those provided in the response to REV 1 DR HAZ-2 (TN 258570) and clarify the correct configurations.

Response: An updated design drawing is provided below and shows the current Project layout with the hydrogen facility removed and the substation, BESS, and O&M facilities in the Option 1 location in the center of the solar facility.

Option 2 for the substation, BESS and O&M facilities is no longer being considered and has been removed from the Project. This option has been removed based on continued electrical and civil design and site constraints .

Table 5.9-1 Use and Location of Hazardous Materials

Chemical Name	Use/Purpose	Quantity	Storage Location	State	Type of Storage Container	Project Phase
Cleaning chemicals/ detergents	Cleaning	NA	O&M Building	Liquid	Cans, buckets	Construction and/or O&M
Paint	Construction and O&M	NA	O&M Building	Liquid	Cans, buckets	Construction and/or O&M
Diesel (dyed and clear)	Fueling Equipment	14,000 gallons	Office Trailers and/or Tooling Connex Boxes	Liquid	AST	Construction
Propane	Construction	1,600 gallons	O&M Building	Gas	Pressurized tank	Construction
Adhesives	Construction and O&M	NA	O&M Building	Liquid, Solid	Bottles	Construction and/or O&M
Sealants	Construction and O&M	NA	O&M Building	Liquid	Bottles	Construction and/or O&M
Hydraulic fluids	O&M	215,800 gallons	Transformers	Liquid	Cans, ASTs	O&M
Sulfur hexafluoride	O&M	620 gallons	HV breakers	Gas	Cylinders	Construction and/or O&M
Mineral oil	O&M	355,000 gallons	GSU transformers	Liquid	Drums, ASTs	Construction and/or O&M
Sulfuric acid	O&M	690 gallons	Battery cells	Liquid	In cells	Construction and/or O&M
Ethylene glycol solution	BESS	NA	BESS	Liquid	NA	Construction and/or O&M
1,1,1,2-tetrafluororethane	BESS	NA	BESS	Gas	Cylinders	Construction and/or O&M
Gasoline	O&M	50 gallons	Flammables storage locker outside O&M Building	Liquid	Cans	O&M
Gasoline	Fueling Equipment	1,800 gallons	Flammables storage locker outside O&M Building	Liquid	Cans	Construction
Coolant	Construction and O&M	50 gallons	NA	Liquid	Cans	Construction and/or O&M
Lubricants	Construction and O&M	NA	NA	Liquid	Cans, ASTs	Construction and/or O&M
Aqueous Ammonia (20-30%)	O&M	NA	NA	Liquid	Cans, bottles	Construction and/or O&M
Lithium-ion batteries	Construction and O&M	7,379 to 14,757 tons	Energy storage	Solid	NA	Construction and/or O&M

NA = not available

Table 5.9-2 Chemical Inventory, Description of Hazardous Materials On-site, and Reportable Quantities

Trade Name	Chemical Name	CAS Number	Maximum Quantity On-site	CERCLA SARA RQ [a]	RQ of Material as Used On-site [b]	EHS TPQ [c]	Regulated Substance TQ [d]	Prop 65
Cleaning chemicals/ detergents	Various	Various	NA	–	–	–	–	No
Paint	Various	Various	NA	–	–	–	–	No
Diesel No. 2	Diesel No. 2	68476-34-6	2,000 gallons	–	–	–	–	No
Propane	Propane	74-98-6	1,600 gallons	–	–	–	–	No
Adhesives	Various	Various	NA	–	–	–	–	No
Sealants	Various	Various	NA	–	–	–	–	No
Hydraulic fluid (FR3 natural ester fluid)	FR3	None	427,380 gallons	42 gallons [e]	42 gallons [e]	–	–	No
Sulfur hexafluoride (SF6)	Sulfur hexafluoride	2551-62-4	620 gallons	–	–	–	–	No
Paraffin oil	Mineral oil	8042-47-5	210,215 gallons	42 gallons [e]	42 gallons [e]	–	–	No
Electrolyte	Sulfuric Acid	7664-93-9	690 gallons	1,000 lbs	3,333 lbs	1,000 lbs	1,000 lbs	Yes
Ethylene glycol solution	Ethylene glycol solution	107-21-1	NA	–	–	–	–	Ye
1,1,1,2-tetrafluororethane	1,1,1,2-tetraflurorethane	811-97-2	NA	–	–	–	–	No
Gasoline	Gasoline	8006-61-9; 86290-85-1	50 gallons	–	–	–	–	No
Coolant	Various	Various	50 gallons	–	–	–	–	No
Lubricants	Oil	None	NA	42 gallons [e]	42 gallons [e]	–	–	No
Lithium-ion batteries	Lithium-ion Batteries	Various	14,757 tons	–	–	–	–	No

[a] RQs are for a pure chemical, per CERCLA SARA (ref. 40 CFR Section 302, Table 302.4). Releases equal to or greater than the RQ must be reported. Under California law, any amount that has a realistic potential to adversely affect the environment and human health or safety must be reported.

[b] RQ for materials as used on-site. Since some of the hazardous materials are mixtures that only contain a percentage of an RQ, the RQ of the mixture can be different than for a pure chemical. For example, if a substance only contains 10 percent of a reportable chemical and the RQ is 100 pounds, the RQ for that material will be (100 pounds)/(10%) = 1,000 pounds.

[c] EHS TPQ (ref. 40 CFR Part 355, Appendix A). If quantities of EHS materials equal to or greater than the TPQ are handled or stored on-site, they must be registered with the local Administering Agency (i.e., Fresno County Environmental Health – CUPA/Hazardous Materials Handling Program).

[d] TQ is from Title 19 CCR Section 2770.5 (state) or Title 40 CFR Section 68.130 (federal).

[e] State RQ for oil spills that will reach California state waters [CA Water Code Section 13272(f)]

Trade Name	Chemical Name	CAS Number	Maximum Quantity On-site	CERCLA SARA RQ [a]	RQ of Material as Used On-site [b]	EHS TPQ [c]	Regulated Substance TQ [d]	Prop 65

Notes:

--: No reporting requirements. The chemical has no listed threshold under this requirement.

NA: not available

CAS: Chemical Abstract Service

CCR: California Code of Regulations

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CFR: Code of Federal Regulations

EHS: Extremely Hazardous Substances

Lbs: pounds

Prop 65: Proposition 65

RQ: Reportable Quantity

SARA: Superfund Amendments and Reauthorization Act

TPQ: Threshold Planning Quantity

TQ: Threshold Quantity

Table 5.9-3 Toxicity, Reactivity, and Flammability of Hazardous Substances Stored On-site

Hazardous Material	Physical Description	Health Hazard/Toxicity	Reactivity and Incompatibilities	Flammability [a]
Cleaning chemicals/ detergents	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Paint	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Diesel No. 2	Oily, light liquid	May be carcinogenic	Strong oxidizers, acids	Flammable
Propane	Colorless, odorless gas	Liquid can cause burns similar to frostbite	Strong oxidizers	Flammable
Adhesives	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Sealants	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Hydraulic fluid (FR3 natural ester fluid)	Light green liquid	Minimal irritation or no effect	Strong oxidizers, Strong Alkali	Combustible
Sulfur hexafluoride (SF6)	Colorless, odorless gas	Can displace oxygen and cause rapid suffocation	None	Nonflammable
Paraffin oil	Oily, colorless liquid	May be fatal if swallowed or enters airways	Strong oxidizers	Combustible
Sulfuric acid	Colorless liquid	Causes burns by all exposure routes	Strong oxidizers, combustible material, bases, organic materials, reducing agents, finely powdered metals, peroxides	Nonflammable
Ethylene glycol solution	Viscous, colorless liquid	May cause skin, eye, and respiratory tract irritation	Strong oxidizers, strong acids, strong bases, aldehydes	Combustible
1,1,1,2-tetraflurorethane	Colorless gas, faint ethereal odor	Liquid can cause burns similar to frostbite	None	Nonflammable
Gasoline	Transparent to light yellow liquid	Carcinogenic, may cause irritation to skin, nose, throat, and lungs	Strong oxidizers	Flammable
Coolant	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Lubricants	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels

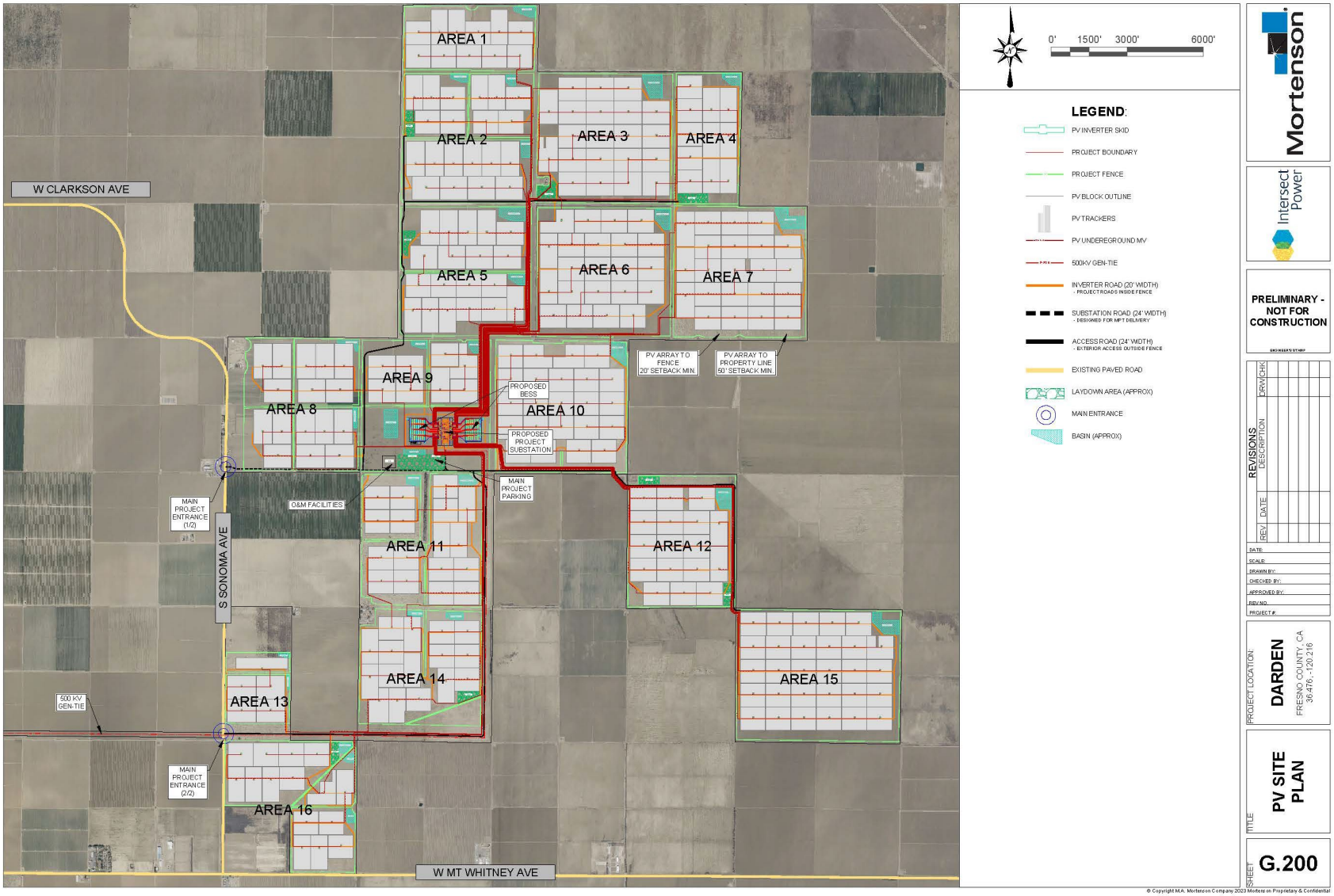
Hazardous Material	Physical Description	Health Hazard/Toxicity	Reactivity and Incompatibilities	Flammability [a]
Lithium-ion BESS	Battery product	Aquatic chronic toxicity; may be carcinogenic	Not considered reactive under normal conditions at ambient temperature; incompatible with combustible materials, organic chemicals, strong acids, reducing substances, strong oxidizers, and chemically active metals.	Flammable

Notes:

[a] In accordance with Caltrans regulations, under 49 CFR Section 173: flammable liquids have a flash point less than or equal to 141°F; combustible liquids have a flash point greater than 141°F

Source: Data were obtained from Material Safety Data Sheets.

Figure 2 SUP DR HAZ-2 Updated Design Drawings



6 Project Description

6.1 Data Request SUP DR PD-1

6.1.1 Data Request SUP DR PD-1

SUP DR PD-1: Please revise the discussion in subsection 2.1.13 of the redline updated Project Description to include the use of LPG for the emergency backup generators as a fossil fuel used by the project. Please also add this updated discussion to the clean version of the Project Description (TN 259509) and resubmit with the updated redline version to the docket.

Response: Section 2.1.13 of the Project Description has been updated to include the use of LPG for the emergency backup generators as a fossil fuel used by the Project. In addition, the Project Description has been updated to reflect removal of the Option 2 BESS, substation, and O&M facilities from the Project. These Project components will be located at Option 1 and include the gen-tie line extension discussed throughout the Opt-In Application and subsequent Project materials. A clean and redline version of the updated Project Description was submitted to the docket on December 13, 2024.

In addition, updated visual simulations have been prepared to remove the green hydrogen facility from the Project. The updated visual simulations are provided as Appendix J to this response set and were submitted via Kiteworks on December 13, 2024.

Project updates since the Opt-In Application was originally submitted has resulted to some initially proposed mitigation measures no longer being needed. An updated list of mitigation measures proposed for the Project is included as Appendix K to this response set.

7 Public Health

7.1 Data Request SUP DR PH-1

7.1.1 Data Request SUP DR PH-1

SUP PH-1: Please provide updated HRA modeling results for both the construction and operation phases or provide justification why an updated HRA is not needed.

Response: Construction and operational emissions will go down with the removal of the green hydrogen facility and the associated diesel emergency backup generators. The reductions to operational emissions associated with the removal of the diesel gensets (and addition of one more LPG genset) are included in Appendix A and demonstrate a large reduction in operational emissions, and a near 100 percent removal of particulate matter (PM) emissions.

PM emissions are the largest contributor to health risk from construction and operation of the Project. Removal of the green hydrogen facility would reduce construction activities and thus associated construction PM emissions. The removal of the diesel gensets would reduce the largest contributor of PM emissions from Project operations. Therefore, the HRA results presented in the original study are inherently conservative and an update to the HRA modeling would demonstrate a reduction of these less than significant health risk impacts. Therefore, an HRA modeling update for both the construction and operation phases is not needed.

8 Water Resources

8.1 Data Request SUP DR WATER-1 through SUP DR WATER-4

8.1.1 Data Request SUP DR WATER-1

SUP DR WATER-1: Please verify that the sole source of water would be groundwater from the project site through purchase options with WWD and not from surface water surplus and storage. In addition, please provide a clean and redlined version of Section 5.13.

Response: Water supply for the Project would be sourced from groundwater conferred to the Project company by Westlands Water District in connection with the option to purchase the property, as described in the updated Project Description. Surface water surplus and storage will not be used. A clean and redlined version of Section 5.13 Water Resources is provided as Appendix L to this response set.

8.1.2 Data Request SUP DR WATER-2

SUP DR WATER-2: Please identify what means of water treatment would be used to ensure potable water is provided to project workers during operations. For the identified means of water treatment, please explain how its use would adhere to federal, state and local drinking water requirements.

Response: During operation of the Project, potable water for operational staff would be provided from the Project's water supply source, which is local groundwater. If needed, an appropriate size and type of water purification system will be selected for placement within the O&M building, to provide potable water for operational workers. The system would be selected based on site specific water quality parameters and may include reverse osmosis, nanofiltration, ion exchange filtration, carbon filtration, and/or ultraviolet treatment. This system would be used exclusively to provide potable water for up to an average of 16 permanent on site daily staff, including an average of 12 permanent staff associated with the solar facility and 4 permanent staff associated with the BESS. With the removal of hydrogen from the Project, the 24 operational staff previously associated with the hydrogen facility are no longer included in the Project. Alternatively to the water purification system, a bottled water service provider may be contracted to provide sufficient water supply for daily use at the facilities. The utility-scale water treatment plant is also no longer a part of the Project, as that facility was intended to provide large quantities of ultra-pure water to the hydrogen electrolyzer.

8.1.3 Data Request SUP DR WATER-3

SUP DR WATER-3: Please provide evidence that all agreements with WWD to extract groundwater during project construction and operations are secure.

Response: Westlands Water District did not cite the full text of item (iv) in their comment letter, which explains the apparent contradiction. While part (iv) of the Option Agreement for the Purchase

of Real Property between WWD and the Applicant ("Option Agreement") provides that WWD will reserve the right to "all groundwater underlying or otherwise appurtenant to the Project", the full text of part (iv) is as follows:

> "*(iv) all groundwater underlying or otherwise appurtenant to the Property; provided, however, that subject to any duly promulgated regulations of general applicability by any Groundwater Sustainability Agency or similar agency (including Seller acting in such capacity), Buyer or its successors or assigns may extract two (2) acre foot of groundwater per year for operation of its solar power generation facilities for each 320 acre portion of the land acquired by Buyer … [and] … during construction of the solar project facilities located on the Property, Buyer or its successors or assigns may extract an additional one hundred thirty (130) acre-feet of groundwater per year for construction water purposes for each 320 acre portion of the land acquired by Buyer[.]*"

The form of Grant Deed that is attached to the Option Agreement, pursuant to which WWD will convey the WWD property to Applicant at the closing, also expressly includes the right of the Applicant to extract groundwater from the Property for both the construction and operation of the Project. A redacted version of the Option Agreement and Grant Deed was submitted as Appendix L in Data Response Set #4 and the language quoted above can be found unredacted in that document.

8.1.4 Data Request SUP DR WATER-4

SUP DR WATER-4: Please indicate if the M&I service option alternative for water supply was evaluated. If so, please explain if this alternative was viable or not and if it was eliminated from further consideration. If the M&I option is proposed for the project, please provide a discussion in the clean and redlined version of Section 5.13 requested above as part of SUP DR WATER-1.

Response: The Municipal and Industrial (M&I) service option described in Westlands Water District's Notice of Preparation comment letter is not being pursued for the Project. Refer to the response to SUP DR WATER-1 above and Appendix L for information on the water supply for the overall Project.

9 Worker Safety and Fire Protection

9.1 Data Request SUP DR WS-1

9.1.1 Data Request SUP DR WS-1

SUP DR WS-1: Please clarify and update the project description to indicate whether the Tesla Megapack 2 XL would be used for the project. If the Tesla Megapack 2 XL is not the selected product, please provide an updated project description with the new vendor and product. Please include any and all documentation for the new product as it relates to fire protection since a new product would have different potential impacts compared to the Tesla Megapack 2 XL. This is important to know because manufacturers have different approaches to fire protection design and philosophy that could change the analysis and potential impacts of the BESS.

Response: The Tesla Megapack 2 XL would be used for the Project. The Project Description has been updated to clarify the Tesla Megapack 2 XL is the selected product and the updated Project Description was submitted to the docket on December 13, 2024.

This page intentionally left blank.

Appendix A

SUP DR AQ-2 Darden Operational Equipment Summary

Appendix B

SUP DR AQ-3 Supplemental SJVAPCD Permit Form and LPG Specifications

Appendix C

SUP DR AQ-4 Updated Section 5.7

Appendix D

SUP DR AQ-7 Updated Appendix N

Appendix E

SUP DR BIO-3 Updated Burrowing Owl Management Plan

Appendix F

SUP DR BIO-3 Updated PV and Gen-tie Biological Resources Management Plan

Appendix G

SUP DR BIO-3 Updated Utility Switchyard Biological Resources Management Plan

Appendix H

SUP DR GHG-1 Updated Appendix N Table 19

Appendix I

SUP DR GHG-2 Displaced Energy Production During 35-year Project Life

Appendix J

SUP DR PD-1 Updated Visual Simulations

Appendix K

SUP DR PD-1 Darden Application Mitigation Measures

Appendix L

SUP DR WATER-1 Updated Section 5.13