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# RESPONSE TO CEC STAFF DATA REQUEST SET 1 (1-38)

STACK SVY03A Campus (23-SPPE-01)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION SUBMITTED BY: **STACK Infrastructure** 

December 2023



#### INTRODUCTION

Attached are STACK Infrastructure's (STACK) responses to California Energy Commission (CEC) Staff Data Request Set No. 1 (1-38) for the SVY03A Data Center Campus (SVY03A Campus) Application for Small Power Plant Exemption (SPPE) (23-SPPE-01). Staff issued Data Request Set No. 1 on November 29, 2023.

The Data Responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as Staff presented them and are keyed to the Data Request numbers (1-38). Additional tables, figures, or documents submitted in response to a data request (e.g., supporting data, stand-alone documents such as plans, folding graphics, etc.) are found in Attachments at the end of the document and labeled with the Data Request Number for ease of reference.

For context, the text of the Background and Data Request precede each Data Response.

#### **GENERAL OBJECTIONS**

STACK objects to all data requests that require analysis beyond which is necessary to comply with the California Environmental Quality Act (CEQA) or which require STACK to provide data that is in the control of third parties and not reasonably available to STACK. Notwithstanding this objection, STACK has worked diligently to provide these responses swiftly to allow the CEC Staff to prepare the Draft Environmental Impact Report (DEIR).

#### AIR QUALITY AND GREENHOUSE EMISSIONS

#### BACKGROUND: Air Quality Management District Application

The proposed project would require a permit from the Bay Area Air Quality Management District (BAAQMD). For purposes of inter-agency consistency, staff needs copies of all correspondence between STACK Infrastructure (applicant) and the BAAQMD in a timely manner to stay up to date on any issues that arise prior to completion of the environmental document.

#### DATA REQUESTS

1. Please provide copies of all substantive correspondence between the applicant and BAAQMD regarding the project, including application and e-mails, within one week of submittal or receipt. This request is in effect until staff publishes the environmental document.

#### **RESPONSE TO DATA REQUEST 1**

STACK has not had any substantive correspondence with the BAAQMD regarding the SVY03A Backup Generating Facility. STACK will comply with the request to docket any such correspondence it has with the BAAQMD up until the staff publishes the environmental document.

2. Please identify the current schedule for the BAAQMD permit application submittal. Please submit a copy of that application to the docket when it is submitted to BAAQMD.

#### **RESPONSE TO DATA REQUEST 2**

At this time STACK anticipates filing ATC applications for some of the emergency backup generators after Staff completes the environmental document for the project.

#### BACKGROUND: Appendix A Missing Equipment Information

In Appendix A of the Application for Small Power Plant Exemption (SPPE), the applicant included the emissions control system manufacturer specification sheets for the C3516E and C3512C backup generator engines (TN 252251; pp. 32 and 34, respectively). However, the emissions control system manufacturer specification sheet for the C32 backup generator engine appears to be missing from Appendix A.

Page 88 of the subject application (TN 252249) also states that an air quality screening analysis was performed to determine which backup generator load case resulted in the highest 1-hour NO<sub>x</sub> concentration. The applicant stated that the load analysis would be provided in Appendix AQ-3 of Appendix A, however, staff could not locate the analysis in Appendix AQ-3.

Staff also could not locate the ammonia emissions associated with the proposed selective catalytic reduction (SCR) device for all three engine types in either the subject application or Appendix A.

# DATA REQUESTS

3. Please provide the emissions control system manufacturer specification sheet for the C32 backup generator engine.

# **RESPONSE TO DATA REQUEST 3**

The emission control system information for the Cat C32 emergency backup generator is provided in Appendix A of the SPPE Application. Please see the table on the bottom of page 32 of TN 252251, showing the percentage reductions in emissions for the C32 as a result of the use of the tier 4 pollution control equipment. The unabated emissions from the C32 are also shown in Appendix A of the SPPE Application at pages 26 through 31 of TN 252251.

4. Please provide the 1-hour NO<sub>x</sub> averaging period load analysis performed for the backup generator engines.

# **RESPONSE TO DATA REQUEST 4**

The NO<sub>2</sub> load screening results are provided in the modeling input/output files for all three (3) engine types: D3516E, 3512C and the C32. The modeling file names include the word SCREEN and have already been provided to the CEC. The screening load analyses were prepared for 40, 50, 75 and 100 percent loads. As expected, the 100 percent load case produced the largest concentrations for all generator types.

5. Please quantify the potential ammonia emission rates and anticipated levels of ammonia slip during operation of the proposed backup generator engines.

#### **RESPONSE TO DATA REQUEST 5**

Each of the CAT engines proposed will be designed to meet an ammonia slip emissions rate of <= 10 ppmvd at 15% O<sub>2</sub>. The following table summarizes the expected emissions on a <u>per engine basis</u>.

Engine	ACFM	% Stk O2 *	ppmvd @ 15% O2	ppm @ Stk % O2	dscfm**	NH3 Lbs/hr	
3516E	22050	9.4	<=10	<=19.4	7757	<=0.40	
3512C	12943	10	<=10	<=18.4	4822	<=0.23	
C32	8115	10	<=10	<=18.4	2862	<=0.14	
*assumes the	*assumes the stack %O2 is consistent with the Miratech/ecoCube data.						

\*\*assumes the stack %H2O is consistent with the Miratech/ecoCube data.

All other data from engine performance sheets.

# BACKGROUND: Enforceable Permit Conditions, Annual Operations

Air quality impact modeling presumes that readiness testing would be limited to occur within certain hours of the day (between the hours of 7:00 a.m. and 5:00 p.m.).

#### DATA REQUEST

6. Please confirm that the applicant would request the BAAQMD to require an enforceable limit that would allow testing of standby engines only between the hours of 7:00 a.m. to 5:00 p.m. daily.

#### **RESPONSE TO DATA REQUEST 6**

STACK accepts this requirement and will propose it to the BAAQMD in its ATC permit applications.

#### BACKGROUND: Stationary Source Greenhouse Gas (GHG) Emissions

On page 146 of Part 1 of the application, the project's annual GHG emissions from testing and maintenance of the backup generators are estimated to be 2,801 short tons (or 2,541 metric tons) from Table 4.3-8 in the Air Quality section. However, a review of Table 4.3-8 reveals that the estimate is only for the 24 D3516E gensets. The emissions for C32 and 3512C gensets are not included.

# DATA REQUEST

7. Please include the GHG emissions for the C32 and 3512C gensets in the estimate of annual emissions from testing and maintenance.

# **RESPONSE TO DATA REQUEST 7**

GHG emissions as presented in Appendix AQ1, for the Maintenance and Readiness Testing scenario are summarized as follows:

- CAT 3516E 2800.9 tpy CO<sub>2</sub>e
- CAT 3512C 61.1 tpy CO<sub>2</sub>e
- CAT C32 39.9 tpy CO<sub>2</sub>e

#### BACKGROUND: Indirect Greenhouse Gas Emissions

*On page 129, the maximum annual electricity demand is calculated in the Energy section. However, the GHG emissions associated with this electricity demand is not.* 

#### DATA REQUEST

8. Please calculate the GHG emissions associated with electricity use.

# **RESPONSE TO DATA REQUEST 8**

STACK has agreed to implement PD GHG-1.1 as a measure incorporated into the design of the SVY03A Campus.

**PD GHG-1.1:** The project owner shall participate in PG&E's Regional Renewable Choice (i.e., 100% carbon-free electricity) for electricity accounts associated with the project,

or participate in a clean energy program that accomplishes the same goal of 100% carbon-free electricity.

As discussed in Section 4.8, pag3 145 of the SPPE Application, the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines for GHG emissions does not have a numerical threshold for GHG emissions from non-stationary sources. STACK has incorporated PD GHG-1.1 which would essentially ensure that there would be no GHG emissions from electricity use for the SVY03A Campus and therefore, theoretical GHG emissions from electricity consumption were not reported. Using a carbon intensity factor of 204 lbs CO2/Mw-hr and assuming 8.760 hours per year, the avoided indirect emissions from energy consumption with the incorporation of PD GHG 1.1 would be 62,091 Metric Tons  $CO_2e^1$ .

# BACKGROUND: Insulative Gas Used in Circuit Breakers and Transformers

On page 31 of Part 1 of the application, the PG&E switchyard and the project substation will not use sulfur hexafluoride (SF6) unless the short circuit current rating is greater than 63kA to align with California Air Resources Board (CARB) requirements.

#### DATA REQUEST

9. Please discuss the alternative that will be used instead of SF6 and quantify the GHG emissions associated with the alternative.

#### **RESPONSE TO DATA REQUEST 9**

There are two alternatives under consideration for equipment that will not use SF6. However, the actual alternative will not be selected until the design of the SVY03 Campus progresses. One alternative from Siemens uses N2 and O2 and therefore would not have any GHG emissions from leakage.

The other alternative is from Hitachi/ABB. The gas mixture used in this equipment is C4-FN. STACK is working with the manufacturer to obtain GHG emission factors for leakage and will provide an estimate of GHG emissions should this alternative be ultimately selected for the SVY03A Campus substation. STACK anticipates docketing the estimate in a further response entitled Supplemental Response to Data Request 9 by December 29, 2023.

 $<sup>^{1}</sup>$  8,760 hours per year x 76.6 MW is 671,016 MWh per year.

STACK SVY03A Response to Data Request Set 1

#### BACKGROUND: Additional Air Quality Analyses Schedule

On page 79 of the subject application, the applicant states that "refrigerant use was not provided at the time of this analysis and will be submitted under separate cover."

Additionally, on page 103 of the subject application, the applicant also states that "when provided by the BAAQMD, a cumulative air quality and public health risk assessment will be prepared and submitted under separate cover."

Staff would like a schedule from the applicant detailing when information on refrigerant emission information and the cumulative air quality and public health risk assessment should be expected by CEC staff.

#### DATA REQUESTS

10. Please provide a schedule detailing when refrigerant emission information would be provided to CEC staff.

#### **RESPONSE TO DATA REQUEST 10**

The SVY03A Campus will use Refrigerant R410A in various pieces of cooling equipment throughout the SVY03A Campus. The cooling equipment includes the CRAC, Mini-Splits, RTU, and MAU Units for the SVY03ADC2 Refrigerant R410A will also be used for the AC Splits, Mini-Splits, and RTUs for the SVY03ADC1 and for the Mini-Splits and RTU for the security building.

The following table includes an estimate of the amount of potential leakage of the refrigerant and GHG emissions for each of the buildings and for each type of equipment.

SVY03ADC1		
AC Splits	2,317	lb
Mini-splits	168.3	lb
RTUs	77.1	lb
Total R410A	2,562	lb
Leakage Rate	2%	/yr
Estimated R410A Leakage	51.2	lb/yr
Equivalent CO2 Emissions	49.3	ton/yr

STACK SVY03A Response to Data Request Set 1

SVY03ADC2		
CRAC Units	2,014	lb
Mini-splits	20	lb
RTU	9.3	lb
MAU	40	lb
Total R410A	2,084	lb
Leakage Rate	2%	/yr
Estimated R410A Leakage	41.7	lb/yr
Equivalent CO2 Emissions	40.1	ton/yr

SVY03ADC3		
Mini-splits	20	lb
RTU	9.3	lb
Total R410A	29.3	lb
Leakage Rate	2%	/yr
Estimated R410A Leakage	0.59	lb/yr
Equivalent CO2 Emissions	0.57	ton/yr

CAMPUS		
Total R410A	4,675	lb
Estimated R410A Leakage	93.5	lb/yr
Equivalent CO2 Emissions	89.9	ton/yr

11. Please provide a schedule detailing when the cumulative air quality and public health risk assessment would be provided to CEC staff.

#### **RESPONE TO DATA REQUEST 11**

Some of the information requested from the BAAQMD has been provided. Atmospheric Dynamics Inc. is currently obtaining additional information and anticipates providing the cumulative air quality and public health risk assessment on or before December 29, 2023.

#### BACKGROUND: Additional Construction BMPs from BAAQMD Comments

Applicant proposed design measure AIR-1.1, includes eight of BAAQMD's nine Basic Best Management Practices (BMPs) listed in BAAQMD's 2022 CEQA Guidelines (Table 5-2, page 5-5). BMP B-6 of Table 5-2, which requires that dust-producing construction activities be suspended when average wind speeds exceed 20 miles per hour, is not present in AIR-1.1.

Additionally, AIR-1.1 does not contain any of the enhanced BMPs listed in BAAQMD's 2022 CEQA Guidelines (Table 5-3, pages 5-5 and 5-6) nor any of the BMPs recommended by BAAQMD in their comments on the STACK Trade Zone Park Environmental Impact Report (Docket No. 21-SPPE-02; TN 249100; pages 2 and 3).

Staff will be proposing to include BMP B-6 from BAAQMD's 2022 CEQA Guidelines, the enhanced BMPs from BAAQMD's 2022 CEQA guidelines, and the additional BMPs recommended by BAAQMD in their comments on the STACK Trade Zone Park Environmental Impact Report to the applicant's proposed design measure AIR-1.1.

#### DATA REQUEST

12. Please confirm whether the applicant would commit to implementing BMP B-6 from BAAQMD's 2022 CEQA Guidelines, the enhanced BMPs from BAAQMD's 2022 CEQA guidelines, and the additional BMPs recommended by BAAQMD in their comments to the STACK Trade Zone Park Environmental Impact Report, and if not, please provide justification for why the applicant cannot implement the additional measures.

# **RESPONSE TO DATA REQUEST 12**

STACK agrees to Staff including Mitigation Measure AQ-1 for the SVY03A Campus from the STACK Trade Zone Park project's final Mitigation, Monitoring and Reporting Program (MMRP), which were sufficient to mitigate potential construction-related air quality impacts. The measures did not include Enhanced Mitigation Measures E-3 and E-6, which involve revegetation and hydroseeding during construction. STACK does not agree to the inclusion of E-3 and E-6 into MM AQ-1 for the SVY03A because they are not needed and are infeasible for this urban brownfield site in the same way that they were not necessary or feasible for the Trade Zone Park site.

#### **BIOLOGICAL RESOURCES**

# BACKGROUND: Special Status Plants and Wildlife

Appendix B of the SPPE Application (TN 252251) contains a discussion of sources and databases that were consulted to assess potential project impacts on special status plant and wildlife species. However, the information provided is incomplete and does not conform with the CEC's requirements for an SPPE contained in section (g)(13)(B)(i) of 20 CCR Div. 2 Ch. 5 App. B.

#### DATA REQUEST

13. Provide detailed maps at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1-inch equals 500 feet (1:6,000) with a 30 percent overlap (provided under confidential cover) and 1:350,000 (for public viewing) that show the proposed project site and related facilities, biological resources including, but not limited to, those found during project-related field surveys and in records from the CNDDB, and the associated areas where biological surveys were conducted. Label the biological resources and survey areas as well as the project facilities.

#### **RESPONSE TO DATA REQUEST 13**

STACK has asked that Staff approve the scale of the requested maps be reduced to the same as a standard USGS quadrant and encompass a radius of approximately 3 miles around the site because the potential biological impacts from the SVY03A Campus would not extend beyond this radius. STACK anticipates docketing the maps on or before December 29, 2023 as a Supplemental Response to Data Request 13.

#### BACKGROUND: Nitrogen Deposition

Section 4.4.2.1 (Project Impacts) on pages 110-111 of the SPPE Application (TN 252249) notes, "To assess the potential effects of nitrogen deposition from the testing and maintenance of the backup generators, the applicant has commissioned a nitrogen deposition analysis on lands contained in the Eden Landing Ecological Reserve. Excessive nitrogen deposition on low- nitrogen habitats can potentially result in adverse impacts to the habitat. The analysis was not complete at the time of the filing of this SPPE Application and will be docketed under separate cover when available."

#### DATA REQUEST

14. Submit a completed assessment of nitrogen deposition from the project on low-nitrogen habitats in the vicinity. The assessment must comply with the CEC's requirements for an SPPE Application contained in section (g)(13)(B)(ii) of 20 CCR Div. 2 Ch. 5 App. B, as follows:

(ii) Provide an aerial map of the isopleth graphic depicting modeled nitrogen deposition rates. The geographical extent of the nitrogen deposition map(s) should include the entire plume and a radius of 6 (six) miles from the source, specifically identifying acres of sensitive habitat(s) within each isopleth (emphasis added). Modeling parameters and files shall be provided.

#### **RESPONSE TO DATA REQUEST 14**

The nitrogen deposition analysis is underway by Atmospheric Dynamics, Inc. and STACK expects to docket it on or before December 29, 2023.

#### HYDROLOGY AND WATER QUALITY

#### BACKGROUND: Wastewater Pretreatment

The application (page 170) states, per the City of Hayward 2040 General Plan, PFS-4.11 Industrial Pretreatment, that the city shall enforce appropriate industrial pretreatment standards and source control to prevent materials prohibited by federal and state regulations from entering the wastewater system and to ensure compliance with the city's local discharge limits. The city shall work with the business community to maintain and implement programs to ensure compliance with all federal, state, and local discharge requirements.

#### DATA REQUESTS

15. Please provide a discussion, prepared by a licensed engineer, regarding project impacts associated with the proposed wastewater from the project. Include the city pretreatment application and associated attachments for calculated flow, constituent concentrations, proposed pretreatment (if any) and all other aspects of the proposed discharge.

#### **RESPONSE TO DATA REQUEST 15**

As water is evaporated in an evaporative cooling system, the concentration of total dissolved solids (TDS) supplied in the make-up (city) water source increases, since these solids cannot evaporate. Evaporative cooling systems must be designed for a specific number of cycles of concentration (COC) that depends on the make-up water quality and evaporative media requirements from the manufacturer. As an example, 5 COC indicates that there are 5 times the concentration of TDS in the IWW relative to the concentration of TDS from the incoming make-up water source. This project is being designed around 3 COC, given the water quality and media requirements. This means that by design, in order to maintain allowable concentrations of TDS in the system, one gallon must be bled down the drain for every two gallons that evaporate into the air. The majority of IWW comes from the operational necessity of maintaining IW COC. Additional IWW is a result of periodic flushing of media, which is a manufacturer requirement to maintain media quality, and periodic dump of DAHU sump pits, which reduces negative impacts of standing water. The calculated IWW quantity for any given year is 1.78 AFY, with a peak expected discharge of 56,800

16. Please provide documentation from the city indicating they have sufficient treatment capacity and willingness to serve this project for the expected life of the project.

# **RESPONSE TO DATA REQUEST 16**

STACK consultants have been working with the City and are preparing a wastewater application. The wastewater application will be filed with the City on December 15, 2023 and STACK will promptly docket any responses to the application within 5 days of receipt. Based on STACK's understanding of the capacity of the City to accept the wastewater, STACK expects the City to provide confirmation that it can serve the SVY03A Campus for the life of the project.

# BACKGROUND: Water Quality Control Plan

The application (pages 245-248) states a domestic water line, operated by the City of Hayward, will serve the project, the City of Hayward purchases 100 percent of its potable water from the San Francisco Public Utilities Commission (SFPUC), and, under normal conditions, the SFPUC meets demand in its service area from its watersheds, which consist of the Tuolumne River, San Antonio Creek, Upper Alameda Creek, Arroyo Honda, and San Mateo Creek watersheds.

# DATA REQUESTS

17. Please revise Part 4.10.2.1 Project Impacts, Section (e) to discuss any potential conflict with State Water Resources Control Board, Resolution No. 75-58, Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling, specifically as it relates to demonstrating that the use of other water supply sources or other methods of cooling would be environmentally undesirable or economically unsound.

# **RESPONSE TO DATA REQUEST 17**

State Water Resources Control Board, Resolution 75-58 (75-58 Policy) is inapplicable to this project because the project is not using any water for power plant cooling. As described in Section 1.2 and 1.3 of the Executive Summary of the SPPE Application for this project, the CEC's exclusive permitting jurisdiction is for thermal power plants. However, STACK acknowledges that the CEC's authorizing statute makes the CEC the lead agency under the California Environmental Quality Act (CEQA) when considering exempting the power plant from its exclusive permitting jurisdiction. Since the backup generating portion of the project is a thermal power plant and is supporting a data center, as lead agency, the CEC must include an analysis of the potential impacts of the data center and the potential impacts of the backup generating facility in order to comply with CEQA's requirement to evaluate the "whole of the action". This CEQA requirement does not legally transform the data center, which can only be permitted by the CEC.

As described in the SPPE Application, the use of evaporative cooling is exclusively for Data Center Building 2, which is neither a thermal power plant as defined by the Commission's authorizing statutes and regulations nor is it part of the backup generating facility. As described in the SPPE Application, no water is being used for cooling any of the generating equipment. Therefore, since no water is used for used for powerplant cooling, the 75-58 Policy is legally and factually inapplicable.

This result is consistent with the Final Environmental Impact Reports (FEIRs) for the most recent SPPEs for other data centers with CEC jurisdictional thermal power plant backup generating facilities.

18. Please provide analysis, prepared by a licensed civil engineer, demonstrating findings of environmental undesirability, economical unsoundness, or otherwise, as it relates to the use of water supply sources or methods of cooling.

# **RESPONSE TO DATA REQUEST 18**

As discussed in Response to Data Request 18 above, the analysis requested would be required by State Policy if the project were a power plant using potable water for cooling. To further explain SVY03ADC1's use of water and its benefits, we provide the following informative description:

The portion of the facility that uses water for cooling is the IT space and its ancillary spaces that house Datahall Air Handling Units (DAHUs). The DAHUs are large Direct Evaporative Cooling air handlers located wholly inside building SVY03ADC1. Direct Evaporative Cooling is the most energy-efficient cooling technology for this space. During 99% of the hours of a Typical Meteorological Year (based on weather in this project's vicinity), these DAHUs will operate in what is known as "Free Air Economization Mode." This means they will cool the IT spaces by using fans to draw outside air into the building and to distribute that cool outside air throughout the IT spaces, using no water in the process. After the IT equipment has cooled its internal components by rejecting heat to this air, an array of rooftop exhaust fans will draw that warmed air up through the building and exhaust it back outside. During the 1% of the hours of a Typical Meteorological Year when the outside air is too hot to be used for IT equipment cooling, the DAHUs will begin using their fans to draw the incoming outdoor air over large, wetted banks of evaporative media, lowering the air's temperature by raising its humidity. The DAHUs will then cool the IT space using this cooler, more humid air. Once the IT equipment has cooled its internal components by rejecting heat into this air, the same array of rooftop exhaust fans will draw this warmed, humidified air up through the building and exhaust it back outside.

While many other types of data center cooling system (e.g. air-cooled chillers, water-cooled chillers, split-system cooling units, etc.) can also operate in some kind of "economization mode," virtually all of them also involve meeting more intense cooling needs by using a "refrigeration cycle" (a.k.a. "heat pump cycle"), where a compressor moves refrigerant around a closed-loop system in a way that allows it to absorb heat from one location in the loop and reject that heat in another location in the loop. These systems all also involve using fans to move air – often both the air used to cooling the indoor space and the air used to reject the heat outdoors. Some of these systems also consume water to reject that heat (e.g. the cooling towers in a water-cooled chiller system.) Others consume no water at all (e.g. air-cooled chillers and split-system cooling units.)

Where the local (meteorological) climate allows their use, Direct Evaporative Cooling systems are almost always markedly more energy-efficient than these other systems for the simple reason that a Direct Evaporative Cooler only spends electrical power on using fans to move air, while these other systems spend electrical power both on using fans to move air and on using compressors to circulate refrigerant. Not only do these other systems need to spend that additional power operating the compressor, but the waste heat given off by the compressor is added to the overall total amount of heat that the system needs to reject.

With Direct Evaporative Cooling systems for IT spaces, the main potential drawback is simply that, in many climates, there will be some times during the year where a direct evaporative cooler cannot lower the temperature of outdoor air low enough to avoid damaging the IT equipment. Other data centers in the same climate as this project may use some of these alternatives to Direct Evaporative Cooling because the IT equipment in their facilities requires cooler operating temperatures because it was not designed to tolerate operating in the slightly warmer conditions that this facility will use.

Since this facility will only need to use any water for cooling, at all, during 1% of the hours of a Typical Meteorological year, the facility's water usage will appear very "spiky." In other words, the use of water for cooling is significantly minimized to only those infrequent times of the year and is limited to only using water in proportion to how dire the situation. To ensure this "spikiness" in water demand would not be a problem for the water utility's general operations, the SVY03A Campus includes water storage tanks to "flatten the curve" if required by the City of Hayward.

In short, this facility's specific implementation of Direct Evaporative Cooling was chosen because it uses the least amount of water out of all the options that use *some* amount of water, and because it's markedly more energy-efficient than all the options that use *zero* water.

#### PROJECT DESCRIPTION-TRANSMISSION

The SPPE application indicates that the SVY03A Backup Generating Facility (SVY03ABGF) would deliver electricity to SVY03A Campus. The SVY03ABGF includes an onsite substation with two electrical supply lines that would connect to a new PG&E switchyard. Staff requires a complete description of the both the SVY03A Campus interconnection to the PG&E transmission grid and the reliability of the PG&E grid in order to understand the potential operation of the back-up generators.

#### DATA REQUESTS

19. Please provide a complete one-line diagram for the new PG&E switchyard. Show all equipment ratings, including bay arrangement of the breakers, disconnect switches, buses, and related equipment that would be required for interconnection of the on-site project substation. Please label the name of the transmission lines which connect the switchyard to the PG&E system.

# **RESPONSE TO DATA REQUEST 19**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received, it will be docketed as Supplemental Response to Data Request 19.

20. Please provide the conductor name, type, current carrying capacity, and the overhead conductor size for the 115 kV transmission lines which connect the existing PG&E Eastshore-Grant 115 kV line to the new switchyard. Provide a map showing the route and pole locations of the extensions.

# **RESPONSE TO DATA REQUEST 20**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received, it will be docketed as Supplemental Response to Data Request 20.

21. Please provide pole configurations that would support the 115 kV overhead line which would loop into the new switchyard and to the on-site substation.

#### **RESPONSE TO DATA REQUEST 21**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received, it will be docketed as Supplemental Response to Data Request 21.

22. Please provide information that reviews the frequency and duration of historic outages of the Eastshore-Grant 115 kV line and related facilities that would likely trigger the loss of electric service to the proposed onsite substation and could lead to the emergency operations of the diesel-powered generators. This response should identify the reliability of service historically provided by PG&E to similar customers in this part of its service territory.

# **RESPONSE TO DATA REQUEST 22**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received it will be docketed as Supplemental Response to Data Request 22.

23. Please explain whether adding the SVY03A Campus would cause an overload to the PG&E transmission system which would require upgrades to the existing system.

#### **RESPONSE TO DATA REQUEST 23**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received, it will be docketed as Supplemental Response to Data Request 23.

- 24. Please provide the following relative to Public Safety Power Shutoff events:
  - a. Would historical Public Safety Power Shutoff events have resulted in the emergency operations at the proposed SVY03A Campus?
  - b. Have there been changes to the PG&E system around the SVY03A Campus that would affect the likelihood that future Public Safety Power Shutoff events would result in the operation of emergency generators at the proposed SVY03A Campus?

#### **RESPONSE TO DATA REQUEST 24**

STACK has requested the information from PG&E that is necessary for STACK to provide a complete response. STACK expects the information to be provided in January, 2024. Once received, it will be docketed as Supplemental Response to Data Request 24.

#### **PROJECT DESCRIPTION – WATER**

#### BACKGROUND: Wastewater Discharge

The application (page 34) states the use of the evaporative cooling system would result in approximately 2.8 acre-feet per year (AFY) (approximately 50,000 gallons per day (GPD) during peak use) of wastewater discharge to the existing City of Hayward wastewater system. The application (page 249) also states that "The project would generate on average approximately 14,827 gallons of wastewater per day."

#### DATA REQUESTS

25. Please correct this discrepancy and indicate a correct amount of projected wastewater discharge and assure consistency throughout the application document.

#### **RESPONSE TO DATA REQUEST 25**

Please see Response to Data Request 28 below for the amount of projected wastewater discharge Staff should use in the EIR.

26. Wastewater discharge rates expressed in AFY and GPD are inconsistent. Provide consistent amounts, prepared by a licensed civil engineer, to clarify rates in AFY and GPD.

#### **RESPONSE TO DATA REQUEST 26**

Please see Response to Data Request 28 below.

#### BACKGROUND: Potable Water Used for Cooling

The application (Section 2.3.11.2) states the project will require approximately 9.5 AFY of potable water, of which 5.2 AFY will be used for cooling.

Also, Table 2.3-1 indicates a projected demand of 9.5 AFY, but the application (page 249) also states "The project would have an annual water demand of 8.9 acre-feet per year."

#### DATA REQUESTS

27. Please provide information, prepared by a licensed civil engineer, indicating how potable water use quantities provided were calculated. Include a description of plant processes

along with water balance diagrams depicting peak water use, systems, associated flow in GPD and AFY.

# **RESPONSE TO DATA REQUEST 27**

The potable water uses were calculated based on engineering best estimates for this preliminary level of design. The project will undergo further design which will be reviewed by the City of Hayward as part of its building permit process. Water balance diagrams have not been prepared and are not necessary for the CEC Staff to evaluate the potential impacts pursuant to CEQA. The level of specificity requested in this data request is more than is required to perform a CEQA analysis and is beyond what has been asked in the past backup generating facilities supporting data center SPPE projects.

Potable water usage for the Industrial Water (IW) system is broken down into 2 main categories; water that has been evaporated into the air and exhausted out of the building and water that has been sent to drain to maintain COC, flush, and dump requirements. Analysis of hourly meteorological data allows us to predict the amount of water that will evaporate in a typical year. Note that this will fluctuate from year-to-year, since hourly data takes an average of available data. The volume of water that is sent to drain is, in part, a function of the volume of water being evaporated. Water evaporates, the concentration of TDS increases, and then water is sent to drain to maintain COC.

Potable water and wastewater usage were calculated using ASPE (American Society of Plumbing Engineers) data (see attached). This table outlines the typical water and wastewater usage per occupant per day. SVY03A building types most closely align with the "office" classification. The tables include estimates based on each occupant using approximately 13 gallons of water a day. Most of that water will find its way back to the sewer system (toilets, urinals, sinks, etc.) which is why the water and sewer values are the same.

28. Please have a licensed civil engineer correct this discrepancy between the amounts stated in Table 2.3-1 and page 249 and indicate the amount of water demand for all projected uses and make sure to be consistent throughout the application documents.

#### **RESPONSE TO DATA REQUEST 28**

Please use the following table to replace Table 2.3-1 in the application for the CEC Staff CEQA analysis.

# WATER USE SUMMARY

SVY03ADC1 - Water Use							
Peak 24-hour PeriodYearly TotalYearly TotalDaily Average(gallons)(gallons)(AFY)(gallons)							
Industrial Water (IW)	168,400	1,467,200	4.50	4,020			
Potable Water	780	284,700	0.87	780			
Landscape	3,350	1,221,943	3.75	3,350			
TOTAL	172,530	2,973,843	9.13	8,150			

SVY03ADC2 - Water Use							
	Peak 24-hour Period (gallons)	Yearly Total (gallons)	Yearly Total (AFY)	Daily Average (gallons)			
Industrial Water (IW)	0	0	0	0			
Potable Water	390	142,350	0.44	390			
Landscape	0	0	0	0			
TOTAL	390	142,350	0.44	390			

SVY03ADC1 + SVY03ADC2 - Water Use					
Peak 24-hour PeriodYearly TotalYearly TotalDaily Average(gallons)(gallons)(AFY)(gallons)					
TOTAL	172,920	3,116,193	9.56	8,540	

SVY03ADC1 IW Storage Tank Capacity (total, 4 tanks)172,000 gallonsSVY03ADC1 IW Storage Tank Capacity (per tank)43,000 gallons

# WASTEWATER SUMMARY

SVY03ADC1 - Wastewater							
Peak 24-hour Period (gallons)Yearly Total (gallons)Yearly Total (AFY)Daily Average (gallons)							
Industrial Wastewater (IWW)	56,800	580,200	1.78	1,590			
Sewer	780	284,700	0.87	780			
Landscape	0	0	0	0			
TOTAL	57,580	864,900	2.65	2,370			

SVY03ADC2 - Wastewater							
Peak 24-hour PeriodYearly TotalYearly TotalDaily Average(gallons)(gallons)(AFY)(gallons)							
Industrial Wastewater (IWW)	0	0	0	0			
Sewer	390	142,350	0.44	390			
Landscape	0	0	0	0			
TOTAL	390	142,350	0.44	390			

SVY03ADC1 + SVY03ADC2 - Wastewater					
	Peak 24-hour PeriodYearly TotalYearly TotalDaily Ave(gallons)(gallons)(AFY)(gallon)				
TOTAL	57,970	1,007,250	3.09	2,760	

#### BACKGROUND: Recycled Water Used for Cooling

The application (pages 42) states the applicant investigated the use of recycled water to be used at the site for evaporative cooling and was rejected because Hayward's recycled water is not sufficient, would require expensive treatment, and the infrastructure is not close to the site.

#### DATA REQUEST

29. Please provide analysis, prepared by a licensed civil engineer, demonstrating your determination that recycled water use for cooling is infeasible. Include consideration of insufficiency (or lack of availability), and associated cost for treatment and delivery. A complete discussion along with supporting analysis is required. Include a discussion of factors relevant to the project as it relates to the Hayward Recycled Water Project.

#### **RESPONSE TO DATA REQUEST 29**

As discussed in Response to Data Request 17 above, the project is not subject to SWRCB Policy 75-58 because the backup generating facility, which is the only portion of the project that creates electricity, is not using water for cooling. For a Small Power Plant Exemption process the CEC is preparing an EIR pursuant to CEQA and is not performing a LORS conformance analysis. For other projects that augmented their cooling systems with water, the CEC has not required the analysis identified in this data request. Notwithstanding that the CEC Staff did not need this information for any prior projects to determine that the project will not cause significant water-related impacts, STACK provides the following general information.

First, the SVY03A Campus uses a very small amount of water overall and only about half of its potable use for evaporative cooling. As discussed in the Response to Data Request 18 above, the use of evaporative cooling is likely to occur for only 1 percent of the hours during the year and therefore is very infrequent. The cooling system design takes into account a higher than industry average operating temperature of the data halls and, with the small amount of evaporative cooling on very hot days, results in significant electricity reduction when compared to most cooling technologies authorized by the CEC in granting recent SPPEs.

STACK did investigate using recycled water instead of potable water for the limited evaporative cooling proposed in SVY03DC1, but, since the recycled water quality showed high amounts of ammonia and total alkalinity, expensive pretreatment would likely be required. In addition, the project would have had to construct a new pipeline to the site that would add additional costs to the facility. With these constraints adding costs, and since such a low volume of water is being proposed (SVY03A Campus is proposing total water use that is less than STACK's Trade Zone Park Project), no detailed information or analysis of how much more the use of recycled water would cost has been prepared. A qualitative decision that it would be more expensive and that it is not necessary to mitigate any environmental impact was deemed sufficient to move forward with the current electricity-saving design.

# BACKGROUND: Potable Water Used for Landscape

Table 2.3-1 indicates a projected demand of 3.75 AFY for landscaping. The application (page 149) references City Policy NR-6.9 and states "The project would be designed to meet CALGreen requirements for building efficiency including use of water efficient plumbing fixtures and would utilize water efficient landscaping plants and irrigation systems to reduce water demand on-site. Therefore, the project would be consistent with this measure."

# DATA REQUEST

30. Please provide analysis, prepared by a licensed civil engineer, providing information on how project demand for landscaping was calculated, what plans and systems were considered to reduce water demand on-site, and why evaporative cooling system wastewater or recycled water could not be used instead of potable water for landscape irrigation.

#### **RESPONSE TO DATA REQUEST 30**

The water use calculations are based on metrics such as historic climate data, plant factor/WUCOLS (Water Use Classification of Landscape Species), and irrigation efficiency to

get us to the total annual water demand. Water demand is represented as an annual average and should be adjusted to reflect seasonal fluctuations in precipitation, temperature, wind and other environmental factors. All plants typically receive appropriately 15% higher watering during installation period in order to establish healthy and deep root growth. After the establishment period of three years, the watering frequency can be strategically reduced. Throughout the site we are using all low and very low water-use shrubs, vines and groundcovers. To minimize water demand across the site, we are using a mix of efficient irrigation methods throughout the site. Within two of the irrigated stormwater infiltration ponds, we are using in-line drip for slopes and rotators within the basins. The other two stormwater infiltration ponds are using a non-irrigated hydroseed mix within the basins and inline drip on the slopes. Along the perimeter, around main buildings and at entry of the property we are using subsurface inline drip, which maximizes water efficiency and reduces overall water-use. In the perimeter larger open areas of the site we are using rotators. For all the trees we are using multi-stream bubblers.

#### **TRANSPORTATION**

BACKGROUND: Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration for SVY03A Data Center Campus

The Hayward Executive Airport is located approximately 1.75-miles (9,290-feet) north of the project site. Title 14, Part 77.9 of the Code of Federal Regulations requires FAA notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the construction or alteration exceeds a slope of 100 to 1 extending outward and upward from the nearest point of the nearest runway of the airport (CFR 2020). Runway 10R/28L at the Hayward Executive Airport is 5,694 feet in length.

The threshold for the FAA notification 100 to 1 surface exceedance height is approximately 92 feet at the project site. If a project's height, including any temporary equipment (such as cranes used during construction) or any ancillary structures (such as transmission poles), exceeds the 100 to 1 surface, the project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

The small penthouse on the roof top of the data center building would extend to a height 116.5 feet therefore the project applicant must file FAA Form 7460-1 Notice of Proposed Construction or Alteration to comply with federal requirements. Compliance with this federal requirement is established through FAA determinations.

# DATA REQUEST

31. Please prepare and submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA for the proposed project's buildings, transmission poles, and temporary construction equipment, such as cranes, which would exceed the 100 to 1 surface height of 92 feet. Submit the FAA's determinations to the project docket log once they are received.

# **RESPONSE TO DATA REQUEST 31**

FAA Form 7460-1 Notice of Proposed Construction or Alternation has been submitted to the FAA on December 6th, 2023. When the FAA assigns an Aeronautical Study Number and provides it to STACK, the information will be docketed for Staff's use in preparation of the Draft EIR. Staff should note that the requirement to file an FAA for temporary construction equipment will be satisfied by the contractor prior to using equipment such as cranes prior to construction and not likely prior to the CEC issuing its decision on the SPPE.

#### BACKGROUND: Thermal Plume Analysis

According to the SPPE application, the project would have emergency generators and air-cooled chillers and the project site is located 1.72 miles north of the Hayward Executive Airport.

Therefore, staff will require the following information to complete its evaluation of thermal plumes from the 28 emergency generators and server chilling units that would serve the SVY03ADC1 and SVY03ADC2 buildings to ensure air traffic safety and analyze any potentially significant impacts from such plumes.

# DATA REQUESTS

32. Please perform a thermal plume modeling analysis of the project's emergency generators for the SVY03A and provide modeling files (or calculation spreadsheets) with all calculations embedded in. Please perform a thermal plume modeling analysis of the heat rejection equipment used to cool the buildings and data servers at the SVY03ADC1 and SVY03ADC2 and provide modeling files (or calculation spreadsheets) with all calculations embedded in.

# **RESPONSE TO DATA REQUEST 32**

STACK has engaged Atmospheric Dynamics, Inc. to prepare a thermal plume analysis which is now underway. STACK expects to docket the analysis on or before December 29, 2023.

33. Please describe in detail the Heating Ventilation Air Conditioning equipment with enough detail to confirm the thermal plume modeling.

# **RESPONSE TO DATA REQUEST 33**

The basic cooling strategy in the largest parts of SVY03ADC1 is very different from that of SVY03ADC2, so the strategy for each of the two buildings is described separately below.

Broadly, SVY03ADC1 can be divided into three types of interior spaces: office areas for operations staff; "electrical rooms" that house the transformers, transfer switches, and other large equipment involved in distributing electrical power around the IT spaces; and the IT spaces where the computers do their computing (a.k.a. "Datahalls").

HVAC for the office areas on each floor is performed by a conventional Variable Air Volume ("VAV") System. In such a system, during warm seasons, a packaged rooftop unit ("RTU") performs all the heat rejection needed to keep one floor of the office cool and comfortable. Like

most packaged RTUs, during warm weather the RTUs in this design use a refrigeration cycle to absorb heat from air destined for the indoors, and they reject that heat to outdoor air using an air-cooled condenser coil.

HVAC for the "electrical rooms" is accomplished by a number of large split-system air conditioners. These operate on the same principle that a conventional residential air conditioning system works. These units are not heat pumps because, even during the winter, the electrical power distribution equipment in these rooms releases enough heat that the room requires cooling, rather than heating. The heat released by the electrical power distribution equipment in these rooms is a small percentage of the total amount of power that passes through the equipment, but the amount of power that passes through the equipment is so large that even that small percentage of heat losses would be sufficient to keep the room too warm in the wintertime if no cooling was available at that time of year.

HVAC for the IT spaces is accomplished using Direct Evaporative Cooling technology in air handling units that, in this design, are called "DAHUs" (Datahall Air Handling Units). These DAHUs are located inside the building on the same floor as the IT spaces that they cool, and they draw in outside air through louvers in the walls of the building, rather than the roof. For the overwhelming majority of the year (99% of the hours in a Typical Meteorological Year), the DAHUs cool the IT spaces simply pulling air directly from the outdoors, mixing it with some amount of hot air returning from the IT spaces, and then supplying that mixture to the IT spaces as "cooling." (This is sometimes known as "free cooling" or "direct economization.")

The way heat moves through a space that is cooled by a Direct Evaporative Cooling system can seem counter-intuitive when compared to spaces cooled by chillers or heat pumps. If "cooling" is a process by which heat energy is absorbed from one physical substance and rejected to another physical substance, a Direct Evaporative Cooler does not technically provide any cooling. Instead, a Direct Evaporative Cooler lowers the temperature of a given parcel of air by reallocating some of the air's internal energies from the "temperature" subcategory to the "keeping slightly more water in gaseous form" subcategory, all while the overall amount of energy in that parcel of air stays the same. There is no portion of a Direct Evaporative Cooling unit, itself, that truly absorbs or rejects heat, which is part of what makes Direct Evaporative Cooling one of the most energy-efficient forms of cooling. While other types of cooling systems need to spend energy both on moving air with fans and on compressing refrigerant with compressors, a Direct Evaporative Cooling system only needs to spend energy on moving air with fans.

During the relatively small number of hours per year when the DAHUs are in Direct Evaporative Cooling mode, they draw in air from the outside, lower that air's temperature by evaporating water into it, and then supply that cool, moist air to the IT space. The computers in the IT space reject heat to that air, raising its temperature, and then that warm, moist air is exhausted out the roof of the facility by arrays of exhaust fans. Accordingly, these air exhausts are never any hotter than the air that comes out the back of a computer rack - because that is literally where the air came from. Under normal operations during the hottest hours of the year, this exhaust air should reach temperatures of up to 120°F. In an extreme failure scenario where there is a total power utility outage during the hottest hours of the hottest day in an unusually hot year, those exhaust air temperatures could reach as high as 130°F.

SVY03ADC2 can also be divided broadly into the same three categories of space, but on a much smaller scale. The office area HVAC is served by a lone conventional packaged heat pump rooftop unit. The "office" and other ancillary functional areas are perfunctory in scale because, after the initial period of loading-in and connecting the IT equipment, the building is intended to function without any worker from any job category needing to be physically present for full, ongoing work shifts. Even the security workers that control access to the building work their permanent shifts in one of the other buildings on campus, only traveling to this building as needed.

The IT spaces are cooled by split-system CRAC units. As with any split system, these CRACs have an indoor component that absorbs heat from the indoor space and an outdoor component that rejects heat to the outdoor air, with these two "split" components connected by paired tubing that carries hot refrigerant toward the outdoor unit and cool refrigerant toward the indoor unit. In conventional parlance, a Computer Room Air Conditioning ("CRAC") unit is a split system where the indoor unit is designed to be installed in the same room as the IT equipment, rather than being connected to the room with the IT equipment through a system of ductwork. These CRAC units are less energy-efficient, overall, than the Direct Evaporative Cooling units that serve the IT spaces of SVY03ADC1, but they are able to maintain air temperatures in the space at a more consistent, cool temperature than the Direct Evaporative Cooling systems can achieve. This is why the small SVY03ADC2 building exists; it provides a space for the few types of IT equipment that can only operate in a narrow range of relatively cool temperatures, which frees up the larger building to take advantage of more energy-efficient cooling systems that produce acceptable conditions for the majority of IT equipment.

HVAC for the "electrical room" space in SVY03ADC2 is accomplished by several split-system air conditioners. It is essentially a scaled-down version of the "electrical room" cooling systems in SVY3ADC1.

34. Please provide a labeled schematic, showing all mechanical equipment on the roof of the SVY03ADC1 and SVY03ADC2 buildings.

#### **RESPONSE TO DATA REQUEST 34**

This drawing will be included in the thermal plume analysis.

- 35. Please provide the following information to support the thermal plume analysis (provide equivalent data if necessary):
  - a. Stack Height (meters) for the data hall air handling units (DAHUs) for the SVY03ADC1 building, the computer room air conditioning (CRAC) units for the SVY03ADC2 building, and the emergency engines for both buildings.
  - b. Exhaust Temp (Kelvin) for the DHAUs, CRAC units, and emergency engines.
  - c. Exit Velocity (meter per second) for the DHAUs units, CRAC units, and the emergency engines.
  - d. Stack Diameter (meters) for the DHAUs, CRAC units, and the emergency engines.
  - e. Number of DHAU, CRAC, and emergency engine unit stacks.
  - f. Arrangement and distance between similar exhaust/heat rejection equipment (e.g., DHAUs, CRAC units, and emergency engine stacks) (meters).

#### **RESPONSE TO DATA REQUEST 35**

The information will be provided in the thermal plume analysis.

#### BACKGROUND: Traffic Scoping Memorandum

According to the City of Hayward Transportation Impact Analysis Guidelines, to initiate the Transportation Impact Analysis Process, project consultants must draft a traffic scoping memorandum after completing a planning application. The traffic scoping memorandum provides project description and background information on the project and will be used by Public Works-Transportation staff to determine the various analyses to be included in the transportation impact analysis (Hayward 2020).

#### DATA REQUEST

36. Please provide a copy of the traffic scoping memorandum that was submitted to the City of Hayward.

#### **RESPONSE TO DATA REQUEST 36**

An analysis of potential traffic impacts was prepared by Kimley Horn and was included in Appendix H. The analysis has been sent to the City of Hayward for review and comment. Should the City request additional analysis be provided, STACK will comply and will docket any such additional information for CEC use. However, STACK believes that the analysis contained in Appendix H demonstrates the project will not have any significant impacts as outlined in the CEQA guidelines and therefore should satisfy the CEC for preparation of its EIR.

#### UTILITIES AND SERVICE SYSTEMS

#### BACKGROUND: City of Hayward 2040 General Plan

The application (page 244) states, per the City of Hayward 2040 General Plan, PFS-3.13 New Development, that the city shall ensure that water supply capacity is in place prior to granting building permits for new development.

#### DATA REQUEST

37. Please provide documentation (in the form of an agreement or will serve letter) from the City of Hayward indicating they have sufficient water supply and willingness to serve this project for the expected life of the project.

#### **RESPONSE TO DATA REQUEST 37**

STACK has requested a will serve letter from the City of Hayward and will docket it when received.

#### BACKGROUND: Wastewater Average Dry Weather Flow

The application (page 249) states "In 2020, 3,922 million gallons of wastewater were collected from the City of Hayward at the Water Pollution Control Facility. This would equate to approximately 10.7 mgd [million gallons per day]. The Water Pollution Control Facility is permitted to accommodate up to 18.5 mgd of wastewater. The project would generate on average approximately 14,827 gallons of wastewater per day, which would represent approximately 0.08 percent of the Water Pollution Control Facility's permitted daily amount. The wastewater values are reflective of the project's proposed usage and no deduction was taken to account for the existing uses on-site. The project would not exceed the treatment capacity of the Water Pollution Control Facility nor would the project increase the need for wastewater treatment beyond the capacity of the Water Pollution Control Facility." Waste Discharge Requirements (East Bay Dischargers Authority, NPDES Permit CA0037869), Discharge Prohibitions, limits the average dry weather influent flow to 18.5 MGD for the City of Hayward facility. Average dry weather influent flow is determined from three consecutive dry weather months (May 1 to October 31) each year. A relation does not exist between an average total amount of wastewater collected over the 2020 year and the permitted average dry weather influent flow limit. The potential for limit exceedance is not based on the percentage of flow in relation to the permitted limit. Rather, it would be determined based on available treatment capacity in relation to a projected maximum daily flow from the project.

#### DATA REQUEST

38. Please have a licensed civil engineer prepare an assessment of actual treatment plant dry weather influent flows, available treatment facility capacity, and the relative increase resulting from project wastewater inflow. Also, provide written confirmation from the City of Hayward.

#### **RESPONSE TO DATA REQUEST 38**

STACK is currently finalizing its water/sewer and a water/sewer service applications which includes the description of the amount and quantity of the SVY03A Campus proposed wastewater discharge streams. The applications will be filed with the City by December 15, 2024. STACK is also requesting a will serve letter from the City demonstrating that the City has the capacity to serve the AVY03A Campus.