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CALIFORNIA
ENERGY COMMISSION

June 7, 2021

Vantage Data Centers
C/O Scott A. Galati
1720 Park Place Drive
Carmichael, California 95608

Data Requests Set 1 for CA3 Backup Generating Facility (21-SPPE-01)

Dear Mr. Galati:

Pursuant to Title 20, California Code of Regulations, sections 1941 and 1716, California Energy Commission (CEC) staff is asking for the information specified in the enclosed Data Requests Set 1, which is necessary for staff analysis of the CA3 Backup Generating Facility (CA3BGF) and associated CA3 Data Center (CA3DC), collectively the "project" under the California Environmental Quality Act (CEQA). This Data Request Set 1 seeks further information in the areas of biological resources, cultural resources, hazards and hazardous materials, project description, and transportation, based on the contents of the application submitted thus far. Staff may submit subsequent data requests in these and other resource areas, based on further information received or as necessary for a complete analysis of the project.

Responses to the data requests are due to staff within 30 days. If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send written notice to me and the Committee within 20 days of receipt of this letter. Such written notification must contain the reasons for not providing the information, the need for additional time, or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please email me at eric.veerkamp@energy.ca.gov

Eric Veerkamp
Project Manager

Enclosure: Data Requests Set 1

CA3 BACKUP GENERATING FACILITY SPPE
DATA REQUESTS SET 1

Table of Contents

CA3 BACKUP GENERATING FACILITY SPPE
DATA REQUESTS SET 1

BIOLOGICAL RESOURCES

BACKGROUND: Recommendations for Modifications to PD BIO-1

In the SPPE application, the applicant proposed project design measure, **PD BIO-1**, requiring pre-construction raptor surveys if trees would be removed during the breeding season. The results of the pre-construction surveys would be provided in a report submitted the City of Santa Clara's Director of Planning and Inspection.

The applicant's proposed design measure (**PD BIO-1**) would not reduce potential impacts to nesting birds to less than significant levels. CEC staff is proposing changes to the applicant's design measures for the following reasons:

- Surveys were only required prior to tree removal; however, surveys should be conducted prior to initiation of any construction-related activities during the breeding season, including demolition and grading or construction, as these activities could also cause disturbance of nesting birds located in trees to remain onsite.
- Pre-construction surveys were only required to find raptor nests; however, these surveys should cover all bird species protected under the Federal Migratory Bird Treaty Act and California Fish and Game Code.
- Birds may complete a nest within a 14-day window during May to August. Therefore, a 30-day window for conducting pre-construction surveys is too long. This 30-day window would allow for a bird to potentially build a nest and lay eggs after a survey had been conducted and prior to initiation of demolition or construction activities, including tree removal, which could cause project delays.
- Standard buffers for raptors are 500 feet and may be modified based on consultation with the appropriate agencies. In addition, while buffers were mentioned there are no details regarding how the buffers would be enforced or monitored.
- There were no details provided regarding the contents of the report and the timing for submittal.
- Per the City of Santa Clara's current procedures, survey reports are required to be submitted for review and approval to the City of Santa Clara's Director of Community Development, instead of Director of Planning and Inspection, prior to the issuance of a demolition permit and/or tree removal permit.

DATA REQUEST

1. Staff proposes the following modifications to the language of **PD BIO-1**. New language is in **bold text** and deleted language is in ~~strike-through text~~)

Please provide the final version of **PD BIO-1** with a statement that the applicant will accept these changes and incorporate the revised version of **PD BIO-1** into the project. If the applicant disagrees with any of these changes, please propose alternate language using **bold text** for new language and ~~strike-through text~~ for deleted language.

PD BIO-1: The project will incorporate the following measures to reduce impacts to nesting birds.

- **If possible, demolition and construction activities, including removal of trees and vegetation clearing shall take place between September and January.** If demolition or **construction activities, including** removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors **and other protected native or migratory birds** shall be conducted by a qualified ornithologist, **approved by the City of Santa Clara,** to identify active ~~nesting raptor~~ nests that may be disturbed during project implementation. ~~Between January and April (inclusive) p~~ **P**re-construction surveys shall be conducted no more than 14 days prior to the initiation of **demolition or** construction activities or tree relocation or removal. ~~Between May and August (inclusive), pre-construction surveys shall be conducted no more than 30 days prior to the initiation of these activities.~~ **Surveys shall be repeated if project activities are suspended or delayed for more than 14 days during the nesting season.** The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the State of California, Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet **for non-raptors to 500** feet **for raptors**) around the nest until the end of the nesting activity. **Any changes to a buffer zone must be approved by the City of Santa Clara, in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing will commence until the ornithologist verifies that the nest(s) are no longer active. If an active bird nest is discovered during demolition or construction, then a buffer zone shall be established under the guidelines specified.**

The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the ~~Director of Planning and Inspection~~ **City of Santa Clara's Director of Community Development** prior to the issuance of a tree removal permit by the City Arborist. **The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning behind any alterations to the initial**

buffer size). The report shall be provided within 10 days of completing a pre-construction nest survey.

CULTURAL RESOURCES

BACKGROUND

CEC staff has received via confidential filing the Phase I Cultural Resources Assessment (CRA) prepared by First Carbon Solutions (FCS)(FCS 2021). The information and analysis contained in section 4.5 of the SPPE application relies on the CRA. The SPPE application states on page 4-44 that a records search was conducted on March 3, 2021 at the Northwest Information Center (NWIC) for the project site and a 0.5-mile radius surrounding it. In reviewing the records search results, results maps, and the correspondence with the Native American Heritage Commission and tribes, staff has determined that the project site location used for the records search is incorrect. The records search and 0.5-mile-radius buffer appears to be based on the properties at 651, 725, and 825 Mathew Street in Santa Clara. The project site is located at 2590 Walsh Avenue, approximately 1.6 miles northwest of the location used for the March 3, 2021, NWIC records search.

DATA REQUESTS

2. Please obtain a records search from the NWIC with a 0.5-mile-radius buffer for the project site located at 2590 Walsh Avenue, using the same parameters as the search conducted for 651, 725, and 825 Mathew Street (see NWIC File No. 20-1637 for guidance).
3. Based upon the results of the new records search, please update the environmental analysis and impacts of the project on cultural and tribal cultural resources in both Section 4.5 of the SPPE application and the confidential CRA and resubmit the information to CEC docket 21-SPPE-01.

BACKGROUND

The supporting documentation from the NWIC records search was not provided to CEC cultural resources staff with the initial submittal of the CRA. Independent analysis of the project cannot proceed without this vital information, as none of the background information provided by the previous studies is included in the SPPE Cultural Resources/Tribal Cultural Resources Section 4.5 or the CRA. The SPPE application states on page 4-45 that none of the structures located on or adjacent to the project site are more than 45 years old, are therefore ineligible for the California Register of Historical Resources, and should not be considered further as potential historical resources under the California Environmental Quality Act (CEQA). Staff is aware of at least one adjacent parcel containing structures that are 45 years or older, the Uranium Substation at 2705

Bowers Avenue (Smart Permit 2021). The original alignment of tracks for the Southern Pacific Railroad Monterey Line is also adjacent to the project site, possibly dating to 1889 or earlier (TRC 2020, page 10; USGS 1889). The tracks are now in operation as part of the CalTrain system. CEC cultural staff applies a minimum one-parcel built environment study area as the Project Area of Analysis (PAA) for urban projects.

DATA REQUESTS

4. Please provide copies of the maps, reports, and resource records of the literature search that provide the background for the revised CRA for 2590 Walsh Avenue (see NWIC File No. 20-1637 for guidance). Please ensure that the results include the summary of the information requested by the applicant's consultant, and the search area radius indicated on maps as provided by the NWIC or prepared by the consultant using shape files provided by the NWIC.
5. Please provide a description of the PAA, including the project site, the observed adjacent parcels, and any linear routes and include a map depicting those areas analyzed for the project, including parcel numbers where applicable. Identify those parcels containing cultural resources that are 45 years or older.
6. Please provide an evaluation of any parcels adjacent to the project site with structures, buildings or objects that are 45 years or older on California Department of Parks and Recreation 523 series forms for their eligibility for listing on the CRHR or as a local landmark.
7. Please update Section 2.2 of the CRA to include a history of the project site following subsection 2.2.4.

REFERENCES

FCS 2021 — First Carbon Solutions. Phase I Cultural Resource Assessment for CA3 2590 Walsh Avenue, City of Santa Clara, Santa Clara County. TN 237521. Confidential. April 1, 2021.

Smart Permit 2021 — City of Santa Clara Smart Permit Search. Accessed April 15, 2021. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/building-division/permits/permit-parcel-search

TRC 2020 — TRC. Phase 1 Environmental Site Assessment. 2590 Walsh Avenue, Santa Clara, CA 95051. Prepared for Vantage Data Centers. 21-SPPE-01. TN 237382. August 2020.

CA3 BACKUP GENERATING FACILITY SPPE
DATA REQUESTS SET 1

USGS 1889—United States Geological Survey, San Jose, California, Sheet. 15-minute Topographic Series. 1889.

HAZARDS AND HAZARDOUS MATERIALS

BACKGROUND: Fuel Tank Replenishment Strategies

On page 2-7 of the SPPE application, the project description specifies that each emergency generator would have a separate diesel fuel tank. Each diesel engine would be readiness tested on a regular schedule, consuming a portion of its fuel.

DATA REQUEST

8. Please provide the fuel tank replenishment strategy and frequency, and the estimated frequency and number of fuel trucks needing to visit the facility for refueling per year.

BACKGROUND: Urea or Diesel Exhaust Fluid (DEF)

On page 2-8, the project description calls for two 55-gallon drums of diesel exhaust fluid (DEF) to be stored within each generator enclosure to be used by the selective catalytic reduction equipment. On page 4-93, the project description states each generator would be required to run for a total of four hours per year under maximum load consuming a portion of the DEF.

DATA REQUESTS

9. Please provide a safety data sheet for the DEF and confirm the estimated shelf life of the DEF.
10. Please provide an estimate of how much DEF would be used in a year per diesel engine.
11. Please provide a DEF replenishment strategy and frequency, and how any excess or degraded DEF, if any, would be disposed of properly.
12. Please provide a schematic showing if the DEF is in a secondary containment.

PROJECT DESCRIPTION

BACKGROUND

The SPPE application indicates that the CA3DC would be supported from the new onsite substation to accommodate electricity to be delivered from Silicon Valley Power (SVP).

CA3 BACKUP GENERATING FACILITY SPPE
DATA REQUESTS SET 1

Staff requires a complete description of both the CA3DC interconnection to the SVP transmission grid and the reliability of the SVP grid to understand the potential operation of the back-up generators.

DATA REQUESTS

13. Please provide a detailed description and drawing of the proposed 60 kilovolt (kV) transmission line route, length, possible interconnection points to the existing SVP system, and possible pole locations. Please provide a legend and label the drawing to show the proposed line route, pole locations, and the existing transmission facilities.

14. Please provide the pole configurations that would be used to support the transmission lines from the SVP 60 kV system to the CD3DC. Show proposed pole structure configurations and measurements.

15. Please explain whether the Uranium Substation or the Walsh Substation could provide 100 percent power to the CD3DC in the event one of the substations is unable to.

16. SVP has divided its 60 kV system into "loops" each with its own name; please clarify which loop the CA3DC on-site substation would be interconnected to.

17. Please explain whether the additional load associated with CA3DC would cause overloads on the SVP transmission system that would require upgrades to the existing system.

18. Please provide for the 60 kV loop on the SVP system that would serve the CA3DC:

    a. A physical description
    b. The interconnection points to SVP service
    c. The breakers and isolation devices and use protocols
    d. A list of other connected loads and type of customers
    e. A written description of the redundant features that allow the system to provide continuous service during maintenance and fault conditions

19. Please describe any outages or service interruptions on the 60 kV systems that would serve the CA3DC:

    a. How many 60 kV lines serve data centers in SVP, and how many data centers are on each?
    b. What is the frequency of these outages and how would they require the use of backup generators?

c. How long were outages and what were their causes?
d. Are there breakers on the 60 kV line or disconnect switch(es) and did they isolate the faults?
e. What was the response to the outage(s) by the existing data centers (i.e., initiated operation of some or all back up generation equipment, data offshoring, data center planned shutdown, etc.)?

20. Please provide the following regarding Public Safety Power Shutoff (PSPS) events:

a. Would historical PSPS events have resulted in the emergency operations of the backup generators at the proposed CA3DC?
b. Have there been changes to the SVP and PG&E system around the CA3DC that would affect the likelihood that future PSPS events would result in the operation of emergency generators at the proposed CA3DC?

TRANSPORTATION

BACKGROUND: CITY OF SANTA CLARA VEHICLE MILES TRAVELED (VMT) POLICY AND PROJECT VMT ANALYSIS

Section 4.17 Transportation of the SPPE application explains a trip generation analysis was conducted to determine the change in the number of trips the project would generate. [KE1]The trip generation was determined based on average rates provided by the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition. The project applicant compared trip rates based on the site's former land use, General Office Building (ITE Land Use 710), to the site's proposed use, Data Center (ITE Land Use 160). The General Office Building land use would generate approximately 1,125 daily trips and the Data Center land use would generate approximately 467 daily trips; thus, the applicant concluded the project would generate a net new -658 daily trips which is less than the 110-daily trip threshold and that the net decrease in trips would reduce VMT; therefore, a VMT analysis would not be required for the project.

CEC staff solicited feedback from City of Santa Clara Public Works staff, Carol Shariat, a Principal Transportation planner, to determine if this was an acceptable application of the city's transportation policy. Ms. Shariat explained a project could forgo a VMT analysis if a project meets the policy's exemption criteria; however, the project does not meet the exemption criteria because the project's estimated daily trips, according to the ITE Land Use Code 160, would generate approximately 467 daily trips, 357 more trips than the 110-daily trip threshold required for the VMT analysis exemption. Each project is evaluated independently to determine if the threshold is reached, irrespective of the previous daily trips estimate of any project that it might replace. Therefore, the project does not qualify for an exemption under the City's VMT Policy.

In addition, the project has not yet gone through the city's Project Clearance Committee (PCC) process. The PCC process is part of the city's development review process. The PCC process needs to be commenced now so that the planning team can determine if a Transportation Demand Management (TDM) plan would be required. Therefore, the applicant is required to conduct a comprehensive VMT analysis in accordance with the city's Transportation Analysis Policy following the project's PCC process and review.

DATA REQUESTS

21. Please coordinate with the City of Santa Clara to begin the PCC process.

22. Please prepare and submit a revised VMT analysis for the project in accordance with City of Santa Clara's VMT Policy. Include a TDM plan, if required.

BACKGROUND: CONSTRUCTION AND DEMOLITION TRIPS

For construction traffic, a qualitative analysis of VMT impacts (instead of a more detailed quantitative analysis) is often appropriate (CANRA 2018; see also CEQA Guidelines section 15064.3(b)). The SPPE application states the site requires demolition of the existing building, ground preparation and grading, and the removal of 10,000 cubic yards of soil and undocumented fill from the site. The application does not provide the maximum and average number of daily trips for construction or the removal of undocumented fill.

DATA REQUEST

23. Please provide the maximum and average number of daily trips for construction and the removal of undocumented fill during both Phase 1 and Phase 2 of the project.

BACKGROUND: Alterations to Public Roadways

Section 2.3.8 Utility Interconnections (page 2-14) states the construction of the new building would require connections to domestic water, fire water, sanitary sewer, fiber, and natural gas. A 12-inch diameter domestic water line, located along the Walsh Avenue frontage of the site, would serve as the primary source of water for the project. There is also a recycled water pipeline located at the intersection of Walsh Avenue and Northwestern Parkway, approximately 500 feet to the southeast of the project site. The applicant plans to extend the recycled water line to use as the project's secondary source of water.

CA3 BACKUP GENERATING FACILITY SPPE
DATA REQUESTS SET 1

DATA REQUEST

24. Would project construction (onsite and offsite) or operations temporarily alter any public roadways or intersections? If so, please identify which roadway and/or intersection would be affected, describe the alteration, and provide the duration of activities on the affected roadway and/or intersection.

BACKGROUND: Thermal Plumes

According to the SPPE application, the project would have emergency generators and air-cooled chillers and the project site is located 1.75-miles west of the Norman Y. Mineta San Jose International Airport. Therefore, staff will require the following information in order to complete its evaluation of thermal plumes from the proposed CA3BGF and the CA3DC building/server chilling units to ensure air traffic safety and analyze any potentially significant impacts from such plumes.

DATA REQUESTS

25. Please perform a thermal plume modeling of the project's emergency generators for the CA3BGF and provide modeling files with all calculations embedded in.

26. Please perform thermal plume modeling of the equipment used to cool the building and data servers at the CA3DC and provide modeling files with all calculations embedded in.

27. Please describe in detail the HVAC equipment, including the chiller units, with enough detail to confirm the thermal plume modeling.

28. Please provide a schematic, showing all mechanical equipment on the roof of the CA3DC.

29. Please provide the following to support the thermal plume analysis (provide equivalent data if necessary):

    a. Stack Height (m) for the CA3DC chiller units and CA3BGF emergency engines
    b. Exhaust Temp (K) for both the chiller units and emergency engines
    c. Exit Velocity (m/s) for both the chiller units and the emergency engines.
    d. Stack Diameter (m) for the chiller units and the emergency engines
    e. Number of chiller unit stacks
    f. Arrangement and distance between the chiller unit stacks (m)

BACKGROUND: Communication with Union Pacific Railroad

Union Pacific Railroad tracks run in an east-west direction adjacent to the southern side of the project site.

DATA REQUEST

30. Please state:

    a. Whether Union Pacific has been notified of the project;
    b. Methods of notification used, and person contacted; and
    c. Any comments received from Union Pacific

REFERENCES

CANRA 2018 – California Natural Resources Agency. CEQA: The California Environmental Quality Act, 2018 Amendments and Additions to the State CEQA Guidelines, Final Adopted Text. Available online at: http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf. Accessed on: May 10, 2021.