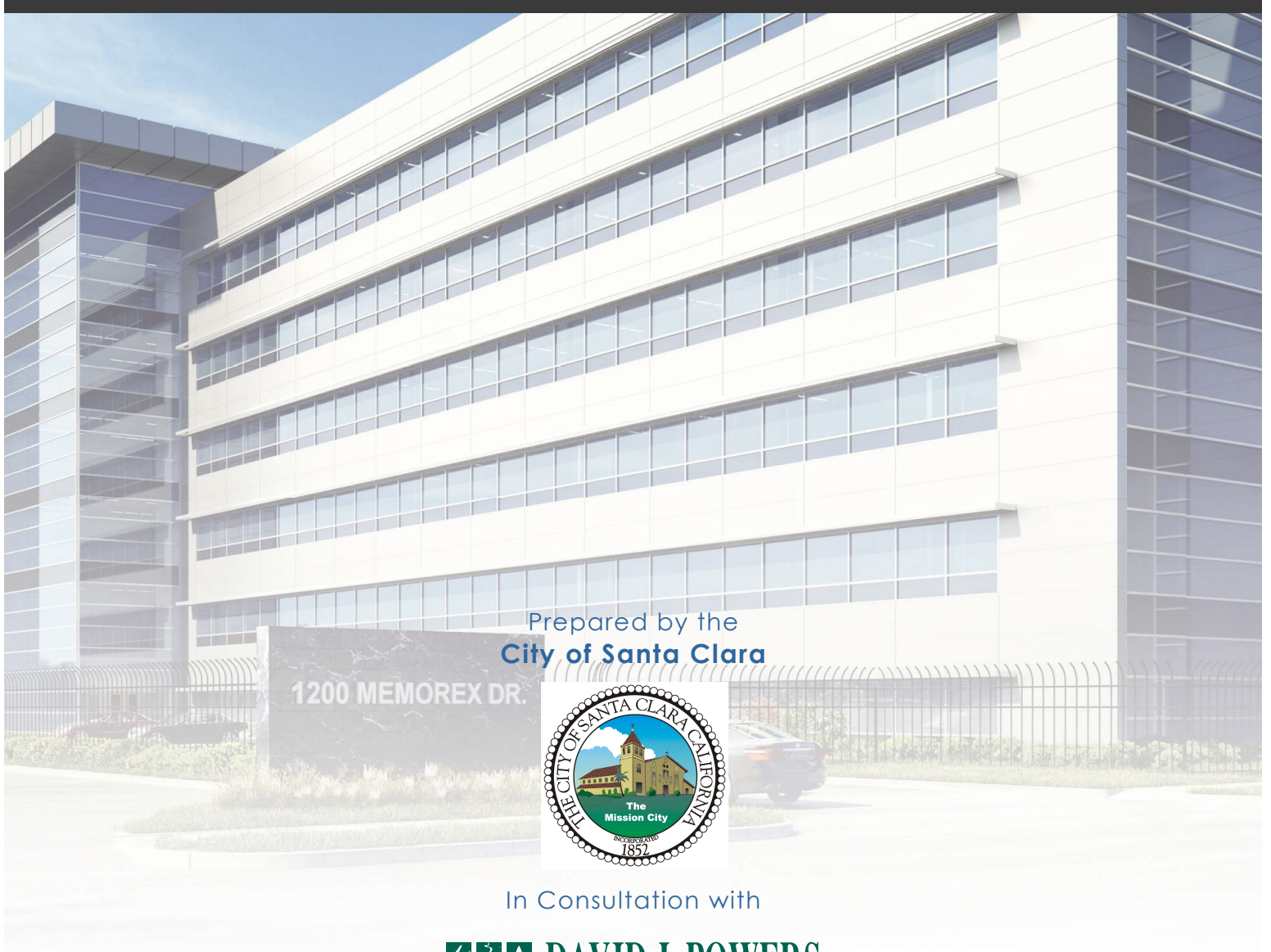


Final Environmental Impact Report

Memorex Data Center



Prepared by the
City of Santa Clara



In Consultation with



October 2021

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Appendix A: Draft EIR Comment Letters

SECTION 1.0 INTRODUCTION

This document, together with the Draft Environmental Impact Report (Draft EIR), constitutes the Final Environmental Impact Report (Final EIR) for the Memorex Data Center project.

1.1 PURPOSE OF THE FINAL EIR

In conformance with the California Environmental Quality Act (CEQA) and CEQA Guidelines, this Final EIR provides objective information regarding the environmental consequences of the proposed project. The Final EIR also examines mitigation measures and alternatives to the project intended to reduce or eliminate significant environmental impacts. The Final EIR is intended to be used by the City and any Responsible Agencies in making decisions regarding the project.

Pursuant to CEQA Guidelines Section 15090(a), prior to approving a project, the Lead Agency shall certify that:

- (1) The Final EIR has been completed in compliance with CEQA;
- (2) The Final EIR was presented to the decision-making body of the Lead Agency, and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and
- (3) The Final EIR reflects the Lead Agency's independent judgment and analysis.

1.2 CONTENTS OF THE FINAL EIR

CEQA Guidelines Section 15132 specify that the Final EIR shall consist of:

- a) The Draft EIR or a revision of the Draft EIR;
- b) Comments and recommendations received on the Draft EIR either verbatim or in summary;
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR;
- d) The Lead Agency's responses to significant environmental points raised in the review and consultation process; and
- e) Any other information added by the Lead Agency.

1.3 PUBLIC REVIEW

In accordance with CEQA and the CEQA Guidelines, the City shall provide a written response to a public agency on comments made by that public agency at least 10 days prior to certifying the EIR. The Final EIR and all documents referenced in the Final EIR are available for public review at the Planning Division office in City Hall at 1500 Warburton Avenue on weekdays during normal business hours. The Final EIR is also available for review on the City's website:

<https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/372/3649>

SECTION 2.0 DRAFT EIR PUBLIC REVIEW SUMMARY

The Draft EIR for the Memorex Data Center project, dated June 2021, was circulated to affected public agencies and interested parties for a 45-day review period from June 17th, 2021 through August 2nd, 2021. The City of Santa Clara undertook the following actions to inform the public of the availability of the Draft EIR:

- A Notice of Availability of Draft EIR was published on the City's website (<https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/372/3649>);
- Notification of the availability of the Draft EIR was mailed to project-area residents and other members of the public who had indicated interest in the project;
- The Draft EIR was sent electronically to the State Clearinghouse on June 15th, 2021, as well as sent to various governmental agencies, organizations, businesses, and individuals (see *Section 3.0* for a list of agencies, organizations, businesses, and individuals that received the Draft EIR); and
- The Draft EIR was made available on the City's website (<https://www.santaclaraca.gov/Home/Components/BusinessDirectory/BusinessDirectory/372/3649>).

SECTION 3.0 DRAFT EIR RECIPIENTS

CEQA Guidelines Section 15086 requires that a local Lead Agency consult with and request comments on the Draft EIR prepared for a project of this type from Responsible Agencies (government agencies that must approve or permit some aspect of the project), trustee agencies for resources affected by the project, adjacent cities and counties, and transportation planning agencies.

The Notice of Availability (NOA) for the Draft EIR was sent to owners and occupants adjacent to the project site and to adjacent jurisdictions. The following agencies received a copy of the Draft EIR from the City or via the State Clearinghouse:

- California Air Resources Board
- Native American Heritage Commission
- Office of Historic Preservation

Copies of the Draft EIR or NOA for the Draft EIR were sent to the following organizations, businesses, and individuals by the City:

- Adams Broadwell Joseph & Cardozo

SECTION 4.0 RESPONSES TO DRAFT EIR COMMENTS

In accordance with CEQA Guidelines Section 15088, this document includes written responses to comments received by the City of Santa Clara on the Draft EIR.

Comments are organized under headings containing the source of the letter and its date. The specific comments from each of the letters and/or emails are presented with each response to that specific comment directly following. Copies of the actual letters and emails received by the City of Santa Clara are included in their entirety in Appendix A of this document. Comments received on the Draft EIR are listed below.

<u>Comment Letter and Commenter</u>	<u>Page of Response</u>
Regional and Local Agencies	
A. Responses to Comment Letter A from the Bay Area Air Quality Management District (dated August 2, 2021).	5

Comment letters were received from one public agency. CEQA Guidelines Section 15086(c) require that:

A Responsible Agency or other public agency shall only make substantive comments regarding those activities involved in the project that are within an area of expertise of the agency or which are required to be carried out or approved by the Responsible Agency. Those comments shall be supported by specific documentation.

Regarding mitigation measures identified by commenting public agencies, the CEQA Guidelines Section 15086(d) state that:

Prior to the close of the public review period, a Responsible Agency or trustee agency which has identified what the agency considers to be significant environmental effects shall advise the Lead Agency of those effects. As to those effects relevant to its decisions, if any, on the project, the responsible or trustee agency shall either submit to the Lead Agency complete and detailed performance objectives for mitigation measures addressing those effects or refer the Lead Agency to appropriate, readily available guidelines or reference documents concerning mitigation measures. If the responsible or trustee agency is not aware of mitigation measures that address identified effects, the responsible or trustee agency shall so state.

REGIONAL AND LOCAL AGENCIES

A. Responses to Comment Letter A from the Bay Area Air Quality Management District (dated August 2, 2021).

Comment A.1: Bay Area Air Quality Management District (Air District) staff has reviewed the Draft Environmental Impact Report (DEIR) for the Memorex Data Center (Project). The Project applicant proposes to demolish the existing buildings on the 9.18-acre site at 1200 Memorex Drive in Santa Clara to construct a four-story, 472,920 square foot data center building with an attached six-story, 87,520 square foot ancillary use office and storage component. To provide an uninterrupted power supply, the Project would include 24 three-megawatt (MW) diesel-fueled generators for the data center, of which 16 generators would be providing 48 MW of backup power generation capacity and eight generators would be providing redundancy, and one 500-kilowatt (kW) diesel-fueled generator for the ancillary use portion of the building.

Since the data center includes backup diesel generators, the Project will require Air District approval of an Authority to Construct and Permit to Operate for the backup diesel generators, and, as such, the Project will be required to comply with all applicable Air District regulations, including, but not limited to, the achieved-in-practice Best Available Control Technology for large emergency backup engines requiring that engines meet U.S. EPA Tier 4 emissions standards. Because diesel combustion produces greenhouse gases (GHGs) and toxic air contaminants (TACs), the Air District encourages the City to go beyond current regulatory requirements and require the project applicant to use cleaner, non-diesel technologies.

Additionally, staff are providing the following recommendations for how the City could enhance its CEQA analysis and minimize emissions from the Project and future proposed data centers.

Consistency with Long-Term State Climate Goals

The DEIR states that “the project would not conflict with plans, policies or regulations adopted for the purpose of reducing the emissions of GHG.” However, the DEIR does not evaluate, disclose, nor discuss the Project's consistency with State policies requiring long-term (i.e., 2045 and 2050) reductions in emissions of GHGs. See *Cleveland Nat'l Forest Foundation v. San Diego Ass'n of Governments* (2017) 3 Cal.5th 497, 516 (CEQA analysis should “compare the [project's] projected greenhouse gas emissions ... from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050.”). Air District staff recommends that the GHG analysis be augmented to include an evaluation, disclosure, and discussion of whether the Project will be consistent with the State's policies beyond 2030. Regardless of whether upon further evaluation the City deems that deployment of 25 diesel backup generators is consistent with the State's carbon neutrality target, the Air District recommends that the City compel the project applicant to adopt alternative zero emitting technologies, procure renewable fuel, commit to otherwise mitigate GHG emissions, or a combination of the three.

Response A.1: Evaluating the project's emissions in 2050 with any specificity would be highly speculative due to uncertainties in the future regulatory environment and the rapidly evolving nature of data center equipment and operations. Neither the State's CEQA Guidelines nor the Bay Area Air Quality Management District's (BAAQMD) CEQA Guidelines require that a project's emissions be compared to 2050 statewide targets, or that a

project show at the time of approval it will meet those targets nearly 30 years into the future. As stated in the May 2017 BAAQMD CEQA Guidelines (Page D-4), "...the 2020 timeframe is examined in this threshold evaluation because doing so for the 2050 timeframe (with respect to population, employment, and GHG emissions projections) would be too speculative. Advances in technology and policy decisions at the state level will be needed to meet the aggressive 2050 goals. It is beyond the scope of the analysis tools available at this time to examine reasonable emissions reductions that can be achieved through CEQA analysis in the year 2050." Instead of evaluating the project's emissions in 2050, it is more appropriate to qualitatively discuss the project's consistency with existing local, regional, and statewide efforts to meet interim GHG targets as part of an overall strategy to achieve the 2050 reduction goal along a trajectory of continual emissions reduction. The project's consistency with relevant plans and policies adopted as part of an overall effort to meet the State's long term goals is included on pages 88-92 of the Draft EIR.

Further, BAAQMD adopted its most recent Clean Air Plan in 2017. As stated in the Clean Air Plan (Page D-24), "Consistent with the GHG reduction targets adopted by the state of California, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050." In other words, the Clean Air Plan is intended to outline BAAQMD's strategy for conforming with the State's long-term GHG reduction policies. The project's consistency with the Clean Air Plan is discussed on pages 35-36 and 90 of the Draft EIR. By evaluating the project's consistency with the Clean Air Plan, the project's consistency with the State's long-term GHG emission goals was also analyzed, since the Clean Air Plan represents BAAQMD's own plan for conformance with those goals.

Additionally, as discussed throughout the Draft EIR, Silicon Valley Power (SVP) would be required to adhere to SB 100, which requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by 2045. As shown on page 87 of the Draft EIR, greater than 95% of the project's GHG emissions are related to consumption of electricity provided by Silicon Valley Power. As a result, by 2045 the project's GHG emissions would be less than 5% of the currently estimated emissions upon project approval, putting the project on track to meet the State's long-term goals discussed in the comment.

It should also be noted that the decision in the court case cited in the comment (Cleveland Nat'l Forest Foundation v. San Diego Ass'n of Governments (2017) 3 Cal.5th 497, 516) does not directly state that a project "should" compare the project's projected greenhouse gas emissions from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050, as implied by the comment. The text from the decision reads "(h)ere, however, it was not difficult for the public, reading the EIR, to compare the upward trajectory of projected greenhouse gas emissions under the Plan from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050." The court case pertains to a long-term regional development plan for the San Diego area that was intended to guide the area's transportation infrastructure from 2010 to 2050. As such, a plan-level, programmatic CEQA analysis was completed that evaluated the project's impacts through the horizon year of 2050. Included in this analysis was an estimate of GHG emissions through the 2050 horizon year, which is a common

methodology when evaluating plan-level projects where individual components of the plan will be constructed throughout the planning horizon and therefore require a comparison to future thresholds that may be in place at the time those components are constructed and become operational. The BAAQMD CEQA Guidelines acknowledge that analysis of GHG impacts for plan-level projects should differ from near-term development projects and include separate methodologies for each. The decision in the court case cited in the comment, therefore, is not directly applicable to the proposed project, which is a near-term development project that would be constructed and fully operational shortly after project approval. As stated previously in this response, for a near-term development project such as the proposed project, it is more appropriate to discuss the project's consistency with existing local, regional, and statewide efforts to meet interim GHG targets as part of an overall strategy to achieve the 2050 reduction goal along a trajectory of continual emissions reduction. As previously noted, the project's consistency with relevant plans and policies adopted as part of an overall effort to meet the State's long term goals is included on pages 88-92 of the Draft EIR.

The Air District's recommendation that the City compel the project applicant to adopt alternative zero emitting technologies, procure renewable fuel, commit to otherwise mitigate GHG emissions, or a combination of the three, is acknowledged and will be taken into consideration. However, since the project would not result in significant GHG impacts and no mitigation is needed to reduce GHG emissions, there would be no CEQA nexus to require these measures.

Comment A.2: Non-Testing/Non-Maintenance Operations

The DEIR should include various scenarios of backup power generation operations beyond routine testing and maintenance. Air District staff has reviewed data regarding backup generator usage during non-testing/non-maintenance operations at several Bay Area data centers. Between September 1, 2019, and September 30, 2020, nearly half of the identified data centers in Santa Clara, San Jose, and Sunnyvale operated backup diesel generators for reasons other than routine testing and maintenance. Many of the data centers operated diesel generators during multiple non-testing/non-maintenance events over the course of this period; operation approached 50 hours for one generator for one event; it appears 40 or more generators operated concurrently at two facilities; and one facility ran diesel generators for approximately 400 hours. Please see Attachment 1 for details of the preliminary information on non-testing/non-maintenance operations that the Air District has received from data centers, which demonstrates the need to evaluate these operations. Air District staff recommends that the DEIR include GHG, criteria pollutant, and TAC impacts due to the non-testing/non-maintenance operations of backup power generators. Various scenarios should be considered for non-testing/non-maintenance operations, including non-zero hours of operation and concurrent generator operations.

Response A.2: As described on page 38 of the Draft EIR, during normal facility operation the proposed generators would not be operated other than for periodic testing and maintenance requirements. CEQA does not require evaluation of emergency conditions, as that involves substantial speculation. The Draft EIR appropriately focused on the reasonably foreseeable operations of the proposed facility, and CEQA does not require lead agencies to attempt to evaluate conditions under future emergency situations, including power outages. As described on page 38 of the Draft EIR, the project proposes a weekly testing schedule that

would result in roughly 18 hours of operation per generator per year, all at zero percent load, with the exception of an annual load bank test that would reach up to 100 percent load. However, for purposes of estimating emissions and potential air quality impacts from the engines, it was assumed that each engine could be operated for 50 hours per year (maximum operation hours allowed by the State’s Air Toxic Control Measure and BAAQMD for testing and maintenance) at a maximum load of 100 percent. Only emissions from routine testing and maintenance, not emissions from potential emergency operations, were considered in the analysis. This procedure is in accordance with BAAQMD Regulation 2, Rule 5, and the number of non-emergency operation hours per year is limited to 50 hours per the Airborne Toxic Control Measure for Stationary Toxic Compression Ignition Engines (Section 93115, Title 17 CCR). The Air District’s procedure for permitting emergency generators is to consider operation of the generators for up to 50 hours per year. By evaluating emissions of the maximum allowed 50 hours of operation per year instead of the 18 hours per year proposed by the project, the Draft EIR overestimates the project’s emissions. This represents a conservative maximum impact scenario based on the allowed operation per California Air Resources Board (CARB) and BAAQMD permit conditions.

The data submitted by BAAQMD as Attachment 1 to the comment letter, which describes generator usage at select data center facilities in the Bay Area between September 1, 2019 and September 30, 2020, was evaluated by the California Energy Commission (CEC).¹ The CEC found that of all the engines at all facilities in the BAAQMD’s review, the average engine ran no more than 36.5 hours over the 13-month reporting period. The CEC also found that no single engine ran for more than 50 hours overall for “non-testing/non-maintenance” purposes. As noted previously, the Draft EIR conservatively evaluated the project’s emissions assuming 50 hours per year of operation per generator. Further, according to the CEC, California experienced different types of emergency situations within the 13-month period of BAAQMD’s review. This period included the expansion of PG&E’s Public Safety Power Shutoff (PSPS) program, severe wildfires, several California Independent System Operator (CAISO)-declared emergencies, and winter storms. From August 14 to 19, 2020, California experienced excessive heat. On August 16, 2020, Governor Newsom declared a State of Emergency because of the extreme heat wave in California and surrounding western states. This was a 1 in 30 year weather event that resulted in the first system-wide power outages California had seen in 20 years. In addition to the extreme heat wave in mid-August, high temperatures and high electricity demand occurred over the 2020 Labor Day weekend, especially on Sunday, September 6 and Monday, September 7, 2020. Thus, the data set provided by BAAQMD is not necessarily representative of an average 13-month period from which one could extrapolate average backup generator use into the future.

Based on Silicon Valley Power (SVP) data, only two outages from 2009 to 2019 affected data centers in the SVP service territory. One approximately 7.5-hour outage on May 28, 2016, which was the result of two contingencies (a balloon and a breaker failure), affected

¹ California Energy Commission. Great Oaks South Backup Generating Facility Final Environmental Impact Report. July 28, 2021. Available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=239063&DocumentContentId=72499>

two data centers. Another 12-minute outage on December 2, 2016 affected four data centers. SVP's root cause analysis of this outage resulted in changes in maintenance procedures to ensure that breakers are reset before power is restored to a portion of the system that was down for maintenance. Outages have been extremely rare, and the consequences or effects on data centers, almost negligible. The data provided by BAAQMD confirms that these types of events remain infrequent, irregular, and unlikely and the resulting emissions are not easily predictable or quantifiable, nor can they be modeled in an informative or meaningful way. According to the data provided by BAAQMD, the generator engines under review were collectively available for over 2.74 million engine-hours during the 13-month period (288 engines * 9,504 hours), and they were used for emergency operations for 1,877 engine-hours, meaning that at those facilities where operation occurred, the engines entered into emergency operations during 0.07 percent of their available time (1,877 / 2.74 million). It is important to note that this calculation only takes into consideration those engines that the BAAQMD found to run during this time period; a more comprehensive review would also include the availability of the 25 facilities that had zero hours of engine run time and also conceivably the 21 facilities that were not surveyed at all. If these facilities without engine runs were included, the estimated probability that any given engine would be likely to run would be lower.

In summary, the Draft EIR appropriately evaluated the project's impacts under normal operating conditions and not emergency operations. The Draft EIR even overestimated the project's emissions by conservatively assuming more generator operation than is proposed. The data provided by BAAQMD emphasizes the fact that emergency operation of generators at data centers is extremely rare, and CEQA does not require lead agencies to attempt to evaluate conditions under future emergency situations, any analysis of which would be highly speculative.

Comment A.3: Recommendations for Achieving Additional Emissions Reductions

To the extent that further analysis concludes the Project's emissions would be cumulatively considerable or inconsistent with the State's climate goals, the Project may need to incorporate mitigation measures to reduce emissions. Even if the revised analysis does not conclude the Project's emissions will be cumulatively considerable, the Air District encourages the City to compel the applicant to incorporate additional emission reduction measures as a condition of approval of the Project. These recommended measures will help ensure the Project's emissions impacts are reduced by the maximum extent possible to achieve the most health protective air quality for Bay Area residents and to achieve climate protection goals established by the State.

Response A.3: As described in Responses A.1 and A.2, the analysis of air quality and GHG impacts in the Draft EIR is appropriate and adequate under CEQA, and no additional analysis is needed. The Draft EIR determined that no mitigation measures are necessary to reduce air quality and GHG impacts to less than significant levels. The Air District's recommendation to compel the applicant to adopt additional emission reduction measures is noted and will be taken into consideration; however, there would be no CEQA nexus to require additional measures.

Comment A.4: The DEIR identifies the predominant source of the Project's GHG emissions as electricity use (75,354 MTCO_{2e} per year), which would be provided by the city-operated, publicly-owned utility, Silicon Valley Power (SVP). Although the DEIR states that SVP is on track to meet the 2030 GHG emissions reduction target, the Project could significantly reduce GHG emissions by purchasing all its electricity from renewable sources. Specifically, Air District staff recommends that the Project join SVP's Santa Clara Green Power program and thus commit to purchase 100 percent renewable electricity, or otherwise negotiate an electricity contract with SVP for 100 percent renewables.

Response A.4: The Air District's recommendation for the project to join SVP's Santa Clara Green Power program is noted and will be taken into consideration. As described on page 88 of the Draft EIR, the project's emissions associated with electricity consumption are considered indirect emissions since they occur at a source other than the project site and have already been accounted for at the emission source. For example, emissions associated with the project's electricity consumption occur at power production facilities within the SVP (and outside suppliers') system. These emissions are accounted for and reported by SVP pursuant to State GHG reporting regulations. Attributing these emissions to the proposed project is, therefore, a form of double counting. Nevertheless, to be conservative, the project's indirect emissions are included in the analysis of the project's GHG impacts in the Draft EIR. The Draft EIR determined that the project would result in a less than significant GHG impact utilizing the standard SVP power mix.

Comment A.5: The Project, as proposed, would use diesel fuel to power the 25 backup generators. To meet State and regional climate goals, the Air District encourages projects to go above and beyond Air District New Source Review permitting requirements. In September 2018, the Air District launched a Diesel Free by '33 campaign to eliminate diesel emissions. Mayor Lisa Gillmor of the City of Santa Clara signed Diesel Free by '33 to pledge the City's commitment to cut diesel use to zero by the end of 2033. To this end, the Air District recommends the City compel the Project applicant to use the cleanest available technologies such as solar battery power, fuel cells, other non-diesel alternatives, or renewable fuels.

Response A.5: As described in the Draft EIR, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The project's consistency with relevant plans and policies adopted as part of an overall effort to meet the State's long term goals is included on pages 88-92 of the Draft EIR. The Diesel Free by '33 campaign is a BAAQMD-sponsored initiative, and is not an applicable plan, policy or regulation. The Air District's recommendation to compel the applicant to use non-diesel alternatives is noted and will be taken into consideration; however, because the project would not result in significant air quality or GHG emissions, there would be no CEQA nexus to require this measure.

Comment A.6: Lastly, Air District staff strongly recommends that the City work with SVP, the Air District, State agencies, and the Project proponents for this and similar proposed data center projects to explore alternative options to reduce GHG emissions. For example, the Air District awarded a Climate Protection Grant of \$300,000 to the City of Santa Clara to conduct a pilot project to demonstrate the viability of replacing data center backup diesel generators with electric energy

storage systems, and the California Energy Commission has previously provided Electric Program Investment Charge (EPIC) awards for data center microgrids.

We encourage the City to contact Air District staff with any questions and/or to request assistance during the environmental review process. If you have any questions or would like to discuss Air District recommendations further, please contact Josephine Fong, Environmental Planner, at (415) 749-8637 or jfong@baaqmd.gov, or Jakub Zielkiewicz, Advanced Projects Advisor, at (415) 749-8429 or jzielkiewicz@baaqmd.gov.

Response A.6: As described in previous responses, the project would not result in significant GHG emissions and, therefore, no additional emissions reductions are required under CEQA. The Air District's recommendation for the City to explore additional GHG emissions reductions options is noted and will be taken into consideration.

SECTION 5.0 DRAFT EIR TEXT REVISIONS

This section contains revisions to the text of the Memorex Data Center Draft EIR dated June 2021. Revised or new language is underlined. All deletions are shown with a ~~line through the text~~.

Text Revisions

Pages 61-62 Section 3.5.2.1, Mitigation Measure MM CUL-2.1 will be **REVISED** as follows:

MM CUL-2.1: A Native American cultural resources monitor shall be on site to monitor all construction activities disturbing native soils. In the event that prehistoric or historical resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the Native American monitor and a qualified archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared by a qualified archaeologist in consultation with a Native American representative and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:

- Identify scope of work and range of subsurface effects (include location map and development plan),
- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found),
- Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information),
- Detail field strategy used to record, recover, or avoid the finds, determined in consultation with a Native American representative (photogs, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods, determined in consultation with a Native American representative (radiocarbon dating, obsidian studies, ~~bone studies~~, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.).
- Report structure, including a technical and layman's report and an outline of document contents in one year of

completion of development (provide a draft for review before a final report),

- Disposition of the artifacts,
- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

Page 159 Section 3.18.2.1, the text on the page will be **REVISED** as follows:

~~No tribes have requested consultation for projects in the area under AB 52, and~~
There are no known TCRs on-site. A record search of the NAHC Sacred Lands File was completed for the site and the results were negative.² While there is the potential for unknown Native American resources or human remains to be present in the project area, impacts would be less than significant with implementation of the City's General Plan policies and Standard Permit Conditions related to discovery of archaeological resources or human remains as well as implementation of mitigation incorporated into the project (described in detail in Section 3.5 Cultural Resources).

On December 5, 2019, letters were sent to the following Native American tribes based on the recommendation of the Native American Heritage Commission (NAHC): Amah Mutsun Tribal Band, the Ohlone Indian Tribe, Amah Mutsun Tribal Band of Mission San Juan Bautista, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, and North Valley Yokuts Tribe. The letters contained information about the project; an inquiry for any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project site; and a solicitation of comments, questions, or concerns with regard to the project. To date, one response was received from the Ohlone Indian Tribe requesting access to a "Phase I Literature Search and/or a Foot Survey" if they had been completed for the project. It is unclear whether the request is referring to a Phase I Environmental Site Assessment, which assesses potential hazardous materials conditions on the site and surrounding area, or a Cultural Resources Literature Search, which assesses potential archaeological resources on the site and surrounding area. Regardless, Appendices L and M include summaries of previous Phase I Environmental Site Assessments completed for the site, and Appendix D includes a Cultural Resources Literature Search completed for the site.

During the public circulation period of the Draft EIR, the Tamien Nation tribe, which was not on the list of tribes provided by the NAHC, formally requested tribal consultation for the proposed project under AB 52. The City met with a representative of the tribe on August 18, 2021. During the meeting, the tribal representative requested that mitigation measure MM CUL-2.1 be modified to

² Nancy Gonzalez-Lopez, NAHC. Personal Communication. December 2, 2019.

include a requirement for a Native American monitor to be present during construction activities disturbing native soils on the site, Native American involvement in the assessment of any cultural resource finds, and Native American involvement in the formulation of a Treatment Plan, should one be necessary. The tribal representative did not indicate that any known TCRs are present on the site or in the project area.

Because the record search of the NAHC Sacred Lands File did not identify the presence of TCRs on the site or surrounding area, and because no tribes ~~responded to outreach letters indicating~~ have provided information indicating that TCRs are present on the site, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

Appendix A: Draft EIR Comment Letters



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

ALAMEDA COUNTY

John J. Bauters
(Secretary)
Pauline Russo Cutter
David Haubert
Nate Miley

CONTRA COSTA COUNTY

John Gioia
David Hudson
Karen Mitchoff
(Vice Chair)
Mark Ross

MARIN COUNTY

Katie Rice

NAPA COUNTY

Brad Wagenknecht

SAN FRANCISCO COUNTY

Tyrone Jue
(SF Mayor's Appointee)
Myrna Melgar
Shamann Walton

SAN MATEO COUNTY

David J. Canepa
Carole Groom
Davina Hurt

SANTA CLARA COUNTY

Margaret Abe-Koga
Cindy Chavez
(Chair)
Rich Constantine
Rob Rennie

SOLANO COUNTY

Erin Hannigan
Lori Wilson

SONOMA COUNTY

Teresa Barrett
Lynda Hopkins

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

Connect with the
Bay Area Air District:



August 2, 2021

Tiffany Vien, Assistant Planner
Community Development Department
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

RE: Memorex Data Center – Draft Environmental Impact Report

Dear Ms. Vien,

Bay Area Air Quality Management District (Air District) staff has reviewed the Draft Environmental Impact Report (DEIR) for the Memorex Data Center (Project). The Project applicant proposes to demolish the existing buildings on the 9.18-acre site at 1200 Memorex Drive in Santa Clara to construct a four-story, 472,920 square foot data center building with an attached six-story, 87,520 square foot ancillary use office and storage component. To provide an uninterrupted power supply, the Project would include 24 three-megawatt (MW) diesel-fueled generators for the data center, of which 16 generators would be providing 48 MW of backup power generation capacity and eight generators would be providing redundancy, and one 500-kilowatt (kW) diesel-fueled generator for the ancillary use portion of the building.

Since the data center includes backup diesel generators, the Project will require Air District approval of an Authority to Construct and Permit to Operate for the backup diesel generators, and, as such, the Project will be required to comply with all applicable Air District regulations, including, but not limited to, the achieved-in-practice Best Available Control Technology for large emergency backup engines requiring that engines meet U.S. EPA Tier 4 emissions standards. Because diesel combustion produces greenhouse gases (GHGs) and toxic air contaminants (TACs), the Air District encourages the City to go beyond current regulatory requirements and require the project applicant to use cleaner, non-diesel technologies.

Additionally, staff are providing the following recommendations for how the City could enhance its CEQA analysis and minimize emissions from the Project and future proposed data centers.

Consistency with Long-Term State Climate Goals

The DEIR states that “the project would not conflict with plans, policies or regulations adopted for the purpose of reducing the emissions of GHG.” However, the DEIR does not evaluate, disclose, nor discuss the Project's consistency with State policies requiring long-term (i.e., 2045 and 2050) reductions in emissions of GHGs. See *Cleveland Nat'l Forest Foundation v. San Diego Ass'n of Governments* (2017) 3 Cal.5th 497, 516 (CEQA analysis should “compare the [project's] projected greenhouse gas emissions ... from 2020 through 2050 with the Executive Order's goal of reducing emissions to 80 percent below 1990 levels by 2050.”). Air District staff recommends that the GHG analysis be augmented to include an evaluation, disclosure, and discussion of whether the Project will be consistent with the State's policies beyond 2030. Regardless of whether upon further evaluation the City deems that deployment of 25 diesel backup generators is consistent with the State's carbon neutrality target, the Air District recommends that the City compel the project applicant to adopt alternative zero emitting technologies, procure renewable fuel, commit to otherwise mitigate GHG emissions, or a combination of the three.

Non-Testing/Non-Maintenance Operations

The DEIR should include various scenarios of backup power generation operations beyond routine testing and maintenance. Air District staff has reviewed data regarding backup generator usage during non-testing/non-maintenance operations at several Bay Area data centers. Between September 1, 2019, and September 30, 2020, nearly half of the identified data centers in Santa Clara, San Jose, and Sunnyvale operated backup diesel generators for reasons other than routine testing and maintenance. Many of the data centers operated diesel generators during multiple non-testing/non-maintenance events over the course of this period; operation approached 50 hours for one generator for one event; it appears 40 or more generators operated concurrently at two facilities; and one facility ran diesel generators for approximately 400 hours. Please see Attachment 1 for details of the preliminary information on non-testing/non-maintenance operations that the Air District has received from data centers, which demonstrates the need to evaluate these operations. Air District staff recommends that the DEIR include GHG, criteria pollutant, and TAC impacts due to the non-testing/non-maintenance operations of backup power generators. Various scenarios should be considered for non-testing/non-maintenance operations, including non-zero hours of operation and concurrent generator operations.

Recommendations for Achieving Additional Emissions Reductions

To the extent that further analysis concludes the Project's emissions would be cumulatively considerable or inconsistent with the State's climate goals, the Project may need to incorporate mitigation measures to reduce emissions. Even if the revised analysis does not conclude the Project's emissions will be cumulatively considerable, the Air District encourages the City to compel the applicant to incorporate additional emission reduction measures as a condition of approval of the Project. These recommended measures will help ensure the Project's emissions impacts are reduced by the maximum extent possible to achieve the most health protective air quality for Bay Area residents and to achieve climate protection goals established by the State.

The DEIR identifies the predominant source of the Project's GHG emissions as electricity use (75,354 MTCO₂e per year), which would be provided by the city-operated, publicly-owned utility, Silicon Valley Power (SVP). Although the DEIR states that SVP is on track to meet the 2030 GHG emissions reduction target, the Project could significantly reduce GHG emissions by purchasing all its electricity from renewable sources. Specifically, Air District staff recommends that the Project join SVP's Santa Clara Green Power program and thus commit to purchase 100 percent renewable electricity, or otherwise negotiate an electricity contract with SVP for 100 percent renewables.

The Project, as proposed, would use diesel fuel to power the 25 backup generators. To meet State and regional climate goals, the Air District encourages projects to go above and beyond Air District New Source Review permitting requirements. In September 2018, the Air District launched a Diesel Free by '33 campaign to eliminate diesel emissions. Mayor Lisa Gillmor of the City of Santa Clara signed Diesel Free by '33 to pledge the City's commitment to cut diesel use to zero by the end of 2033. To this end, the Air District recommends the City compel the Project applicant to use the cleanest available technologies such as solar battery power, fuel cells, other non-diesel alternatives, or renewable fuels.

Lastly, Air District staff strongly recommends that the City work with SVP, the Air District, State agencies, and the Project proponents for this and similar proposed data center projects to explore alternative options to reduce GHG emissions. For example, the Air District awarded a Climate Protection Grant of \$300,000 to the City of Santa Clara to conduct a pilot project to demonstrate the viability of replacing data center backup diesel generators with electric energy storage systems, and the California Energy Commission has previously provided Electric Program Investment Charge (EPIC) awards for data center microgrids.

We encourage the City to contact Air District staff with any questions and/or to request assistance during the environmental review process. If you have any questions or would like to discuss Air District recommendations further, please contact Josephine Fong, Environmental Planner, at (415) 749-8637 or jfong@baaqmd.gov, or Jakub Zielkiewicz, Advanced Projects Advisor, at (415) 749-8429 or jzielkiewicz@baaqmd.gov.

Sincerely,



Greg Nudd
Deputy Air Pollution Control Officer

Attachment 1: Preliminary Back-Up Diesel Engine Operations (Non-Testing/Non-Maintenance)

cc: BAAQMD Director Margaret Abe-Koga
BAAQMD Chair Cindy Chavez
BAAQMD Director Rich Constantine
BAAQMD Director Rob Rennie

Attachment 1: Preliminary Back-Up Diesel Engine Operations (Non-Testing/Non-Maintenance)

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose								
September 1, 2019 - September 30, 2020								
Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.								
Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
1	1	Santa Clara	2	9	5%	90	8/17/20-8/18/20	State Emergency Load Shedding
1	2	Santa Clara	2	8.8	6%	240	8/17/20-8/18/20	State Emergency Load Shedding
1	2	Santa Clara	2	1.2	5%	29	8/17/20-8/18/20	Human error event
1	3	Santa Clara	2	1	1%	5	8/17/20-8/18/20	Human error event
1	4	Santa Clara	2	8.5	25%	390	8/17/20-8/18/20	State Emergency Load Shedding
1	4	Santa Clara	2	1	26%	58	8/17/20-8/18/20	Human error event
1	5	Santa Clara	2	9.1	31%	400	8/17/20-8/18/20	State Emergency Load Shedding
1	6	Santa Clara	2	8.9	21%	300	8/17/20-8/18/20	State Emergency Load Shedding
1	7	Santa Clara	2	8.8	24%	350	8/17/20-8/18/20	State Emergency Load Shedding
1	8	Santa Clara	2	8.8	25%	350	8/17/20-8/18/20	State Emergency Load Shedding
1	9	Santa Clara	2	8.6	22%	325	8/17/20-8/18/20	State Emergency Load Shedding
1	10	Santa Clara	2	9	19%	300	8/17/20-8/18/20	State Emergency Load Shedding
2	1	Sunnyvale	2	12.6	34%	682	Various	Utility inflicted disturbance
2	2	Sunnyvale	2	14.7	41%	795	Various	Utility inflicted disturbance
2	3	Sunnyvale	2	15.3	30%	828	Various	Utility inflicted disturbance
2	4	Sunnyvale	2	13.8	32%	747	Various	Utility inflicted disturbance
2	5	Sunnyvale	2	20.2	26%	1093	Various	Utility inflicted disturbance
3	1	Santa Clara	2	0.5	1%		8/17/20-8/18/20	State Emergency Load Shedding
3	2	Santa Clara	2	1.4	2%		8/17/20-8/18/20	State Emergency Load Shedding
3	3	Santa Clara	2	36.7	40%		8/17/20-8/18/20	State Emergency Load Shedding
3	4	Santa Clara	2.25	0.2	1%		8/17/20-8/18/20	State Emergency Load Shedding
3	5	Santa Clara	2.25	31.7	36%		8/17/20-8/18/20	State Emergency Load Shedding
3	6	Santa Clara	2.25	37.3	36%		8/17/20-8/18/20	State Emergency Load Shedding
4	1	Santa Clara	2.25	0.4	33%	25	8/16/2020	Lightning strikes to transmission line
4	2	Santa Clara	2.25	0.4	33%	25	8/16/2020	Lightning strikes to transmission line
4	3	Santa Clara	2.25	0.4	33%	25	8/16/2020	Lightning strikes to transmission line
4	4	Santa Clara	2.25	0.4	33%	25	8/16/2020	Lightning strikes to transmission line
4	5	Santa Clara	2.25	0.4	33%	25	8/16/2020	Lightning strikes to transmission line
4	6	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	7	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	8	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	9	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	10	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	11	Santa Clara	2.25	0.5	33%	32	8/16/2020	Lightning strikes to transmission line
4	12	Santa Clara	2.25	0.6	33%	38	8/16/2020	Lightning strikes to transmission line

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

September 1, 2019 - September 30, 2020

Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.

Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
4	13	Santa Clara	2.25	0.6	33%	38	8/16/2020	Lightning strikes to transmission line
4	14	Santa Clara	2.25	0.6	33%	38	8/16/2020	Lightning strikes to transmission line
4	15	Santa Clara	2.25	0.6	33%	38	8/16/2020	Lightning strikes to transmission line
4	16	Santa Clara	2.25	0.6	33%	38	8/16/2020	Lightning strikes to transmission line
4	17	Santa Clara	2.25	0.4	43%	33	8/16/2020	Lightning strikes to transmission line
4	18	Santa Clara	2.25	0.4	43%	33	8/16/2020	Lightning strikes to transmission line
4	19	Santa Clara	2.25	0.4	43%	33	8/16/2020	Lightning strikes to transmission line
4	20	Santa Clara	2.25	0.4	43%	33	8/16/2020	Lightning strikes to transmission line
4	21	Santa Clara	2.25	0.4	43%	33	8/16/2020	Lightning strikes to transmission line
4	22	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	23	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	24	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	25	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	26	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	27	Santa Clara	2.25	0.5	43%	41	8/16/2020	Lightning strikes to transmission line
4	28	Santa Clara	2.25	0.6	43%	49	8/16/2020	Lightning strikes to transmission line
4	29	Santa Clara	2.25	0.6	43%	49	8/16/2020	Lightning strikes to transmission line
4	30	Santa Clara	2.25	0.6	43%	49	8/16/2020	Lightning strikes to transmission line
4	31	Santa Clara	2.25	0.6	43%	49	8/16/2020	Lightning strikes to transmission line
4	32	Santa Clara	2.25	0.6	43%	49	8/16/2020	Lightning strikes to transmission line
4	33	Santa Clara	2.25	0.4	52%	34	8/16/2020	Lightning strikes to transmission line
4	34	Santa Clara	2.25	0.4	52%	34	8/16/2020	Lightning strikes to transmission line
4	35	Santa Clara	2.25	0.4	52%	34	8/16/2020	Lightning strikes to transmission line
4	36	Santa Clara	2.25	0.4	52%	34	8/16/2020	Lightning strikes to transmission line
4	37	Santa Clara	2.25	0.4	52%	34	8/16/2020	Lightning strikes to transmission line
4	38	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	39	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	40	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	41	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	42	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	43	Santa Clara	2.25	0.5	52%	43	8/16/2020	Lightning strikes to transmission line
4	44	Santa Clara	2.25	0.6	52%	51	8/16/2020	Lightning strikes to transmission line
5	1	Santa Clara	2	5	46%	325	8/17/20-8/18/20	State Emergency Load Shedding
5	2	Santa Clara	2	6	58%	400	8/17/20-8/18/20	State Emergency Load Shedding
6	1	Santa Clara	2	41.9	30%	200	8/17/20-8/18/20	utility outage

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

September 1, 2019 - September 30, 2020

Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.

Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
6	2	Santa Clara	2	47.7	22%	180	8/17/20-8/18/20	utility outage
6	3	Santa Clara	2	13	2%	20	8/17/20-8/18/20	utility outage
6	4	Santa Clara	2	37.2	54%	500	8/17/20-8/18/20	utility outage
6	5	Santa Clara	2	37.3	38%	250	8/17/20-8/18/20	utility outage
6	6	Santa Clara	2	41.7	0%	20	8/17/20-8/18/20	utility outage
7	1	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	1	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	1	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	2	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	2	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	2	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	3	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	3	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	3	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	4	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	4	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	4	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	5	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	5	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	5	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	6	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	6	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	6	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	7	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	7	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	7	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	8	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	8	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	8	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	9	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	9	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	9	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	10	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	10	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	10	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

September 1, 2019 - September 30, 2020

Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.

Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
7	11	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	11	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	11	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	12	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	12	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	12	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	13	Santa Clara	2.5	3.5	48%	600	8/18/2020	Power outage
7	13	Santa Clara	2.5	3.5	48%	600	9/6/2020	Power outage
7	13	Santa Clara	2.5	2.5	48%	480	8/14/2020	Power outage
7	14	Santa Clara	2	3.7	45%	220	8/17-8/18	Power outage
7	14	Santa Clara	2	4.9	55%	370	9/6/2020	Power outage
7	15	Santa Clara	2	3.7	45%	210	8/17-8/18	Power outage
7	15	Santa Clara	2	0.4	50%	390	9/6/2020	Power outage
7	16	Santa Clara	2	3.7	45%	220	8/17-8/18	Power outage
7	16	Santa Clara	2	4.9	5%	1.5	9/6/2020	Power outage
7	17	Santa Clara	2	0.2	5%	1.4	8/17-8/18	Power outage
7	17	Santa Clara	2	0.2	5%	0.2	9/6/2020	Power outage
7	18	Santa Clara	2	3.7	40%	210	8/17-8/18	Power outage
7	18	Santa Clara	2	4.9	55%	400	9/6/2020	Power outage
7	19	Santa Clara	2	5.5	50%	360	8/17-8/18	Power outage
7	19	Santa Clara	2	4.9	60%	410	9/6/2020	Power outage
7	20	Santa Clara	2	5.5	50%	370	8/17-8/18	Power outage
7	20	Santa Clara	2	4.9	60%	410	9/6/2020	Power outage
7	21	Santa Clara	2	5.5	50%	370	8/17-8/18	Power outage
7	21	Santa Clara	2	4.9	60%	410	9/6/2020	Power outage
7	22	Santa Clara	2	5.5	50%	370	8/17-8/18	Power outage
7	22	Santa Clara	2	4.9	60%	410	9/6/2020	Power outage
7	23	Santa Clara	2	5.5	20%	150	8/17-8/18	Power outage
7	23	Santa Clara	2	0.7	15%	14	9/6/2020	Power outage
7	24	Santa Clara	2	0.2	5%	1	8/17-8/18	Power outage
7	24	Santa Clara	2	0.1	5%	1	9/6/2020	Power outage
8	1	Santa Clara	2	0.3	5%	2	11/27/2019	System-wide power quality event
8	1	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	2	Santa Clara	2	0.3	5%	2	11/27/2019	System-wide power quality event
8	2	Santa Clara	2	0.3	5%	2	2/15/2020	System-wide power quality event

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

September 1, 2019 - September 30, 2020

Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.

Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
8	3	Santa Clara	2	0.3	6%	2	11/27/2019	System-wide power quality event
8	3	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	4	Santa Clara	2	0.3	7%	2	2/15/2020	System-wide power quality event
8	4	Santa Clara	2	0.2	8%	2	11/27/2019	System-wide power quality event
8	5	Santa Clara	2	0.2	10%	2	11/27/2019	System-wide power quality event
8	5	Santa Clara	2	0.2	8%	2	2/15/2020	System-wide power quality event
8	6	Santa Clara	2	0.2	9%	2	11/27/2019	System-wide power quality event
8	6	Santa Clara	2	0.2	7%	2	2/15/2020	System-wide power quality event
8	7	Santa Clara	2	0.2	15%	2	11/27/2019	System-wide power quality event
8	7	Santa Clara	2	0.2	8%	2	2/15/2020	System-wide power quality event
8	8	Santa Clara	2	0.2	13%	2	11/27/2019	System-wide power quality event
8	8	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	9	Santa Clara	2	0.2	9%	2	11/27/2019	System-wide power quality event
8	9	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	10	Santa Clara	2	0.2	12%	2	11/27/2019	System-wide power quality event
8	10	Santa Clara	2	0.2	7%	2	2/15/2020	System-wide power quality event
8	11	Santa Clara	2	0.2	5%	2	11/27/2019	System-wide power quality event
8	11	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	12	Santa Clara	2	0.2	5%	2	11/27/2019	System-wide power quality event
8	12	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	13	Santa Clara	2	0.2	6%	2	11/27/2019	System-wide power quality event
8	13	Santa Clara	2	0.2	7%	2	2/15/2020	System-wide power quality event
8	14	Santa Clara	2	0.2	6%	2	11/27/2019	System-wide power quality event
8	14	Santa Clara	2	0.2	7%	2	2/15/2020	System-wide power quality event
8	15	Santa Clara	2	0.2	12%	2	11/27/2019	System-wide power quality event
8	15	Santa Clara	2	0.2	11%	2	2/15/2020	System-wide power quality event
8	16	Santa Clara	2	0.3	10%	2	11/27/2019	System-wide power quality event
8	16	Santa Clara	2	0.2	9%	2	2/15/2020	System-wide power quality event
8	17	Santa Clara	2	0.3	9%	2	11/27/2019	System-wide power quality event
8	17	Santa Clara	2	0.2	9%	2	2/15/2020	System-wide power quality event
8	18	Santa Clara	2	0.2	7%	2	11/27/2019	System-wide power quality event
8	18	Santa Clara	2	0.2	6%	2	2/15/2020	System-wide power quality event
8	19	Santa Clara	2	0.2	10%	2	11/27/2019	System-wide power quality event
8	19	Santa Clara	2	0.2	8%	2	2/15/2020	System-wide power quality event
8	20	Santa Clara	2	0.2	9%	2	11/27/2019	System-wide power quality event

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

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Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
8	20	Santa Clara	2	0.2	7%	2	2/15/2020	System-wide power quality event
8	21	Santa Clara	2	0.2	17%	2	11/27/2019	System-wide power quality event
8	21	Santa Clara	2	0.2	12%	2	2/15/2020	System-wide power quality event
8	22	Santa Clara	2	0.2	8%	2	11/27/2019	System-wide power quality event
8	22	Santa Clara	2	0.2	8%	2	2/15/2020	System-wide power quality event
8	23	Santa Clara	2	0.2	6%	2	11/27/2019	System-wide power quality event
8	23	Santa Clara	2	0.2	5%	2	2/15/2020	System-wide power quality event
8	24	Santa Clara	2	0.2	6%	2	11/27/2019	System-wide power quality event
8	24	Santa Clara	2	0.2	5%	2	2/15/2020	System-wide power quality event
9	1	Santa Clara	2	8.4	65%	524	8/17/20-8/18/20	State Emergency Load Shedding
9	2	Santa Clara	2	5.6	60%	400	8/17/20-8/18/20	State Emergency Load Shedding
9	3	Santa Clara	2	2.6	50%	300	8/17/20-8/18/20	Equipment failure
9	4	Santa Clara	2	2.9	1%	20	8/17/20-8/18/20	State Emergency Load Shedding
9	5	Santa Clara	0.23	6.5	7%	10	8/17/20-8/18/20	State Emergency Load Shedding
10	1	Santa Clara	2	9	50%	256	8/17/20-8/18/20	State Emergency Load Shedding
10	2	Santa Clara	2	9	50%	256	8/17/20-8/18/20	State Emergency Load Shedding
10	3	Santa Clara	2	9	50%	256	8/17/20-8/18/20	State Emergency Load Shedding
10	4	Santa Clara	2.06	4	60%	296	8/17/20-8/18/20	State Emergency Load Shedding
10	5	Santa Clara	2.06	4	60%	296	8/17/20-8/18/20	State Emergency Load Shedding
10	6	Santa Clara	2.06	4	60%	296	8/17/20-8/18/20	State Emergency Load Shedding
10	7	Santa Clara	3	7	40%	1280	8/17/20-8/18/20	State Emergency Load Shedding
10	7	Santa Clara	3	4	40%	731.5	8/17/20-8/18/20	State Emergency Load Shedding
10	8	Santa Clara	3	7	40%	1280	8/17/20-8/18/20	State Emergency Load Shedding
10	8	Santa Clara	3	4	40%	731.5	8/17/20-8/18/20	State Emergency Load Shedding
10	9	Santa Clara	3	7	40%	1280	8/17/20-8/18/20	State Emergency Load Shedding
10	9	Santa Clara	3	4	40%	731.5	8/17/20-8/18/20	State Emergency Load Shedding
10	10	Santa Clara	3	7	40%	1280	8/17/20-8/18/20	State Emergency Load Shedding
10	10	Santa Clara	3	4	40%	731.5	8/17/20-8/18/20	State Emergency Load Shedding
10	11	Santa Clara	3	5	50%	780	8/17/20-8/18/20	State Emergency Load Shedding
10	12	Santa Clara	3	5	50%	780	8/17/20-8/18/20	State Emergency Load Shedding
10	13	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	14	Santa Clara	3	5	50%	780	8/17/20-8/18/20	State Emergency Load Shedding
10	15	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	16	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	17	Santa Clara	2.75	9	70%	625	8/17/20-8/18/20	State Emergency Load Shedding

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

September 1, 2019 - September 30, 2020

Facility operator data, based on facility responses to BAAQMD's 9/25/20 data request and follow-up conversations. Data may be refined and additional information may be available during follow-up discussions.

Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
10	18	Santa Clara	2.75	8.2	70%	525	8/17/20-8/18/20	State Emergency Load Shedding
10	19	Santa Clara	2.75	8.9	70%	615	8/17/20-8/18/20	State Emergency Load Shedding
10	20	Santa Clara	2.75	11.3	70%	975	8/17/20-8/18/20	State Emergency Load Shedding
10	21	Santa Clara	2	4	60%	238	8/17/20-8/18/20	State Emergency Load Shedding
10	22	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	23	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	24	Santa Clara	3	5.5	50%	930	8/17/20-8/18/20	State Emergency Load Shedding
10	25	Santa Clara	2.75	8.3	70%	530	8/17/20-8/18/20	State Emergency Load Shedding
10	26	Santa Clara	2.75	8.3	70%	530	8/17/20-8/18/20	State Emergency Load Shedding
10	27	Santa Clara	2.75	8.3	70%	530	8/17/20-8/18/20	State Emergency Load Shedding
10	28	Santa Clara	2.75	8.3	70%	530	8/17/20-8/18/20	State Emergency Load Shedding
10	29	Santa Clara	3	11.6	60%	1786		Power bump
10	29	Santa Clara	3	4	60%	616		Power bump
10	29	Santa Clara	3	3.5	60%	539	8/17/20-8/18/20	State Emergency Load Shedding
10	29	Santa Clara	3	3	60%	462		Power bump
10	29	Santa Clara	3	2.7	60%	416		Power bump
10	29	Santa Clara	3	1	60%	154		Power bump
10	29	Santa Clara	3	1	60%	154		Utility outage
10	30	Santa Clara	3	10.1	60%	1555		Utility outage
10	30	Santa Clara	3	5.5	60%	847		Power bump
10	30	Santa Clara	3	4	60%	616		Utility outage
10	30	Santa Clara	3	3.7	60%	569.8	8/17/20-8/18/20	State Emergency Load Shedding
10	30	Santa Clara	3	2.8	60%	431		Power bump
10	30	Santa Clara	3	1	60%	154		Utility outage
10	30	Santa Clara	3	1	60%	154		Utility outage
10	31	Santa Clara	3	11.5	60%	1771		Utility outage
10	31	Santa Clara	3	4	60%	616		Utility outage
10	31	Santa Clara	3	3.7	60%	569.8	8/17/20-8/18/20	State Emergency Load Shedding
10	31	Santa Clara	3	3	60%	462		Power bump
10	31	Santa Clara	3	2.7	60%	416		Power bump
10	31	Santa Clara	3	1	60%	154		Utility outage
10	31	Santa Clara	3	1	60%	154		Utility outage
10	32	Santa Clara	3	11.6	60%	1786		Utility outage
10	32	Santa Clara	3	4	60%	616		Utility outage
10	32	Santa Clara	3	3	60%	462		Power bump

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

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Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
10	32	Santa Clara	3	3	60%	462	8/17/20-8/18/20	State Emergency Load Shedding
10	32	Santa Clara	3	2.7	60%	416		Power bump
10	32	Santa Clara	3	1	60%	154		Utility outage
10	32	Santa Clara	3	1	60%	154		Utility outage
10	33	Santa Clara	3	11.6	60%	1786		Utility outage
10	33	Santa Clara	3	4	60%	616		Utility outage
10	33	Santa Clara	3	3.7	60%	569.8	8/17/20-8/18/20	State Emergency Load Shedding
10	33	Santa Clara	3	3	60%	462		Power bump
10	33	Santa Clara	3	2.8	60%	431.2		Power bump
10	33	Santa Clara	3	1	60%	154		Utility outage
10	33	Santa Clara	3	1	60%	154		Utility outage
10	34	Santa Clara	3	11.6	60%	1786		Utility outage
10	34	Santa Clara	3	4	60%	616		Utility outage
10	34	Santa Clara	3	3.7	60%	569.8	8/17/20-8/18/20	State Emergency Load Shedding
10	34	Santa Clara	3	3	60%	462		Power bump
10	34	Santa Clara	3	2.9	60%	447		Power bump
10	34	Santa Clara	3	1	60%	154		Utility outage
10	34	Santa Clara	3	1	60%	154		Utility outage
10	35	Santa Clara	3	6	40%	450	8/17/20-8/18/20	State Emergency Load Shedding
10	36	Santa Clara	3	2	40%	150	8/17/20-8/18/20	State Emergency Load Shedding
10	37	Santa Clara	3	5.5	40%	412	8/17/20-8/18/20	State Emergency Load Shedding
10	38	Santa Clara	3	5.5	40%	412	8/17/20-8/18/20	State Emergency Load Shedding
10	39	Santa Clara	3	5.5	40%	412	8/17/20-8/18/20	State Emergency Load Shedding
10	40	Santa Clara	2.75	8.3	70%	530	8/17/20-8/18/20	State Emergency Load Shedding
11	1	Santa Clara	2	5.8	25%	390	8/17/20-8/18/20	Power supplier request
11	1	Santa Clara	2	4.1	25%	390	8/17/20-8/18/20	Power supplier request
11	2	Santa Clara	2	4.7	31%	280	8/17/20-8/18/20	Power supplier request
11	2	Santa Clara	2	3.9	31%	280	8/17/20-8/18/20	Power supplier request
11	3	Santa Clara	2	5.6	28%	380	8/17/20-8/18/20	Power supplier request
11	3	Santa Clara	2	4.3	28%	380	8/17/20-8/18/20	Power supplier request
11	4	Santa Clara	2	5.4	43%	605	8/17/20-8/18/20	Power supplier request
11	4	Santa Clara	2	3.5	43%	605	8/17/20-8/18/20	Power supplier request
11	5	Santa Clara	0.23	6	17%	27	8/17/20-8/18/20	Power supplier request
11	5	Santa Clara	0.23	3.5	17%	27	8/17/20-8/18/20	Power supplier request
11	6	Santa Clara	2	4.5	17%	75	8/17/20-8/18/20	Power supplier request

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

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Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
11	7	Santa Clara	2	4.7	8%	75	8/17/20-8/18/20	Power supplier request
11	8	Santa Clara	2	4.7	8%	100	8/17/20-8/18/20	Power supplier request
11	9	Santa Clara	2	4.7	9%	100	8/17/20-8/18/20	Power supplier request
11	10	Santa Clara	2	4.8	11%	100	8/17/20-8/18/20	Power supplier request
11	11	Santa Clara	0.23	4.8	7%	30	8/17/20-8/18/20	Power supplier request
12	1	Santa Clara	0.23	2.9	14%	87	8/17/20-8/18/20	Utility outage
12	2	Santa Clara	2	43	8%	160	8/17/20-8/18/20	Utility outage
12	3	Santa Clara	2	42.8	6%	160	8/17/20-8/18/20	Utility outage
12	4	Santa Clara	2	38	15%	420	8/17/20-8/18/20	Utility outage
12	5	Santa Clara	2	24	55%	500	8/17/20-8/18/20	Utility outage
12	6	Santa Clara	2	10	6%	160	8/17/20-8/18/20	Utility outage
12	7	Santa Clara	2	10.4	7%	160	8/17/20-8/18/20	Utility outage
12	8	Santa Clara	2	42.1	30%	250	8/17/20-8/18/20	Utility outage
12	9	Santa Clara	2	41.8	30%	250	8/17/20-8/18/20	Utility outage
12	10	Santa Clara	2	10.3	1%	50	8/17/20-8/18/20	Utility outage
12	11	Santa Clara	2	10	7%	160	8/17/20-8/18/20	Utility outage
13	1	Santa Clara	2	19.8	37%	80.3	Various	Utility power outages; power blips, UPS/board repair
13	2	Santa Clara	2	20.4	37%	82.5	Various	Utility power outages; power blips, UPS/board repair
13	3	Santa Clara	1.25	14.96	43%	527	Various	Utility power outages; power blips, UPS/board repair
13	4	Santa Clara	1.25	14.94	42%	525	Various	Utility power outages; power blips, UPS/board repair
13	5	Santa Clara	1.25	14.92	43%	523	Various	Utility power outages; power blips, UPS/board repair
14	1	Santa Clara	2.7	1.9	22%	90	11/27/2019	Utility sag event
14	2	Santa Clara	2.7	1.9	32%	95	11/27/2019	Utility sag event
14	3	Santa Clara	2.7	1.9	1%	57	11/27/2019	Utility sag event
14	4	Santa Clara	2.7	1.9	34%	99.75	11/27/2019	Utility sag event
14	5	Santa Clara	2.7	4.4	41%	422	8/18/2020	Mandatory load transfer
14	6	Santa Clara	2.7	6.3	32%	445	8/18/2020	Mandatory load transfer
14	7	Santa Clara	2.7	4.7	2%	139	8/18/2020	Mandatory load transfer
14	8	Santa Clara	2.7	4.5	48%	123	8/18/2020	Mandatory load transfer
15	1	Santa Clara	2	14	65%	693		
15	2	Santa Clara	2	14	65%	693		
15	3	Santa Clara	2	14	65%	693		
15	4	Santa Clara	2	14				
15	5	Santa Clara	2	14				
15	6	Santa Clara	2.5	14	19%	486		

Preliminary back-up diesel engine operations (non-testing/non-maintenance) for select facilities in Santa Clara, Sunnyvale, and San Jose

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Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
15	7	Santa Clara	2.5	14				
16	1	Santa Clara	2	2.4	2%	45.6	7/31/2020	Utility power outage
16	2	Santa Clara	2	2.4	18%	48	7/31/2020	Utility power outage
16	3	Santa Clara	1.5	2.4	30%	40.8	7/31/2020	Utility power outage
16	4	Santa Clara	1.5	2.4	25%	38.4	7/31/2020	Utility power outage
17	1	San Jose	2	2	14%	80	11/26/2019	Commercial power outage
17	2	San Jose	2	2	14%	80	11/26/2019	Commercial power outage
18	1	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	1	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
18	2	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	2	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
18	3	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	3	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
18	4	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	4	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
18	5	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	5	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
18	6	San Jose	2	1.5	30%	150	8/16/2020	Utility power outage
18	6	San Jose	2	1.5	30%	150	8/25/2020	Utility power outage
19	1	San Jose	1.5	4	20%	200	8/19/2020	Substation transformer power equipment failure
19	2	San Jose	1.5	4	17%	190	8/19/2020	Substation transformer power equipment failure
19	3	San Jose	1.5	4	50%	290	8/19/2020	Substation transformer power equipment failure
19	4	San Jose	1.5	4	60%	310	8/19/2020	Substation transformer power equipment failure
19	5	San Jose	1.5	4	53%	300	8/19/2020	Substation transformer power equipment failure
19	6	San Jose	1.5	4	40%	280	8/19/2020	Substation transformer power equipment failure
20	1	Santa Clara	3	4.1	42%	410	8/18/2020	State Emergency Load Shedding
20	1	Santa Clara	3	3.5	42%	350	9/7/2020	State Emergency Load Shedding
20	1	Santa Clara	3	1.5	42%	150	8/17/2020	State Emergency Load Shedding
20	2	Santa Clara	3	4.1	37%	410	8/18/2020	State Emergency Load Shedding
20	2	Santa Clara	3	3.6	37%	360	9/7/2020	State Emergency Load Shedding
20	2	Santa Clara	3	2.6	37%	250	8/17/2020	State Emergency Load Shedding
20	3	Santa Clara	3	4.1	40%	410	8/18/2020	State Emergency Load Shedding
20	3	Santa Clara	3	3.6	40%	360	9/7/2020	State Emergency Load Shedding
20	3	Santa Clara	3	1.8	40%	180	8/17/2020	State Emergency Load Shedding
20	4	Santa Clara	3	4.1	38%	410	8/18/2020	State Emergency Load Shedding

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Data Center #	Engine #	City	Engine Size (MW)	Hours of operation (non-testing/non-maintenance)	Estimated engine load percentage during each non-testing/non-maintenance operations	Estimated fuel usage during each non-testing/non-maintenance operation (gallons)	Date	Explanation of non-testing/non-maintenance operation
20	4	Santa Clara	3	3.6	38%	360	9/7/2020	State Emergency Load Shedding
20	4	Santa Clara	3	1.4	38%	150	8/17/2020	State Emergency Load Shedding
20	5	Santa Clara	3	4.2	20%	410	8/18/2020	State Emergency Load Shedding
20	5	Santa Clara	3	1.1	20%	120	8/17/2020	State Emergency Load Shedding
20	6	Santa Clara	3	4.1	17%	410	8/18/2020	State Emergency Load Shedding
20	6	Santa Clara	3	1.3	17%	130	8/17/2020	State Emergency Load Shedding
20	7	Santa Clara	3	4.1	18%	410	8/18/2020	State Emergency Load Shedding
20	7	Santa Clara	3	1.4	18%	140	8/17/2020	State Emergency Load Shedding
20	8	Santa Clara	3	4.1	19%	410	8/18/2020	State Emergency Load Shedding
20	8	Santa Clara	3	1.4	19%	140	8/17/2020	State Emergency Load Shedding
20	9	Santa Clara	3	4.2	15%	420	8/18/2020	State Emergency Load Shedding
20	9	Santa Clara	3	1.1	15%	110	8/17/2020	State Emergency Load Shedding
20	10	Santa Clara	3	4.1	29%	410	8/18/2020	State Emergency Load Shedding
20	10	Santa Clara	3	1.3	29%	130	8/17/2020	State Emergency Load Shedding
20	11	Santa Clara	3	4.3	18%	430	8/18/2020	State Emergency Load Shedding
20	11	Santa Clara	3	1.4	18%	140	8/17/2020	State Emergency Load Shedding
20	12	Santa Clara	3	4.1	19%	410	8/18/2020	State Emergency Load Shedding
20	12	Santa Clara	3	1.4	19%	140	8/17/2020	State Emergency Load Shedding
20	13	Santa Clara	3	4.1	3%	120	8/18/2020	State Emergency Load Shedding
20	13	Santa Clara	3	1.2	3%	40	8/17/2020	State Emergency Load Shedding
20	14	Santa Clara	3	4	2%	120	8/18/2020	State Emergency Load Shedding
20	14	Santa Clara	3	1.3	2%	40	8/17/2020	State Emergency Load Shedding
20	15	Santa Clara	3	4	2%	160	8/18/2020	State Emergency Load Shedding
20	15	Santa Clara	3	1.3	2%	50	8/17/2020	State Emergency Load Shedding
20	16	Santa Clara	3	2	30%	20	8/17/2020	State Emergency Load Shedding
20	16	Santa Clara	3	1.5	30%	20	8/18/2020	State Emergency Load Shedding
20	17	Santa Clara	3	0.9	10%	20	8/17/2020	State Emergency Load Shedding
20	17	Santa Clara	3	0.8	10%	20	8/18/2020	State Emergency Load Shedding

MITIGATION MONITORING OR REPORTING PROGRAM

Memorex Data Center EIR

CITY OF SANTA CLARA

October 2021

P R E F A C E

Section 21081 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring or Reporting Program whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring or reporting program is to ensure compliance with the mitigation measures during project implementation.

On _____, the City Council certified the Environmental Impact Report (EIR) for the Memorex Data Center project. The Final EIR concluded that the implementation of the project could result in significant effects on the environment and mitigation measures were incorporated into the proposed project or are required as a condition of project approval. This Mitigation Monitoring or Reporting Program addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the EIR concluded that mitigation measures would not be required to reduce significant impacts.

**MITIGATION MONITORING OR REPORTING PROGRAM
MEMOREX DATA CENTER**

Impacts	Mitigation	Timeframe for Implementation	Responsibility for Implementation	Oversight of Implementation
Biological Resources				
<p>Impact BIO-1: Tree removal during the nesting season could impact protected raptors and/or other protected migratory birds. Any loss of fertile bird eggs, or individual nesting birds, or any activities resulting in nest abandonment during construction would constitute a significant impact.</p>	<p>MM BIO-1.1: Construction shall be scheduled to avoid the nesting bird season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.</p> <p>If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure no nest shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).</p> <p>During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.</p> <p>A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.</p>	<p>Preconstruction surveys shall be conducted no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April), and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).</p>	<p>The project applicant.</p>	<p>The Director of Community Development and CDFW.</p>

**MITIGATION MONITORING OR REPORTING PROGRAM
MEMOREX DATA CENTER**

Impacts	Mitigation	Timeframe for Implementation	Responsibility for Implementation	Oversight of Implementation
<p>Impact BIO-5: Trees to be retained on-site may be injured during project construction activities including demolition and site grading. Additionally, trees adjacent to the proposed overhead transmission line may require substantial pruning to ensure clearance.</p>	<p>MM BIO-5.1: <u>Barricades</u> – Prior to initiation of construction activity, temporary barricades would be installed around all trees in the construction area. Six-foot high, chain link fences would be mounted on steel posts, driven two feet into the ground, at no more than 10-foot spacing. The fences shall enclose the entire area under the drip line of the trees or as close to the drip line area as practical. These barricades will be placed around individual trees and/or groups of trees.</p> <p>MM BIO-5.2: <u>Root Pruning (if necessary)</u> – During and upon completion of any trenching/grading operation within a tree’s drip line, should any roots greater than one inch in diameter be damaged, broken or severed, root pruning to include flush cutting and sealing of exposed roots should be accomplished under the supervision of a qualified Arborist to minimize root deterioration beyond the soil line within 24 hours.</p> <p>MM BIO-5.3: <u>Pruning</u> – Pruning of the canopies to include removal of deadwood should be initiated prior to construction operations. Such pruning will provide any necessary construction clearance, will lessen the likelihood or potential for limb breakage, reduce ‘windsail’ effect and provide an environment suitable for healthy and vigorous growth.</p> <p>MM BIO-5.4: <u>Fertilization</u> – Fertilization by means of deep root soil injection should be used for trees to be impacted during construction in the spring and summer months.</p>	<p>Prior to initiation of construction activity.</p> <p>During and upon completion of any trenching/grading operation within a tree’s drip line.</p> <p>Prior to construction operations.</p> <p>During construction in the spring and summer months.</p>	<p>The project applicant.</p>	<p>The Director of Community Development.</p>

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	<p>MM BIO-5.5: <u>Mulch</u> – Mulching with wood chips (maximum depth of three inches) within tree environments should be used to lessen moisture evaporation from soil, protect and encourage adventitious roots and minimize possible soil compaction.</p>	During construction.		
Cultural Resources				
<p>Impact CUL-1: The project would demolish the existing improvements on site and therefore would have a significant and unavoidable impact on a historical resource.</p>	<p>MM CUL-1.1: <u>Historic American Buildings Survey (HABS) Recordation.</u> Prior to project implementation, the historical resource will be recorded to Historic American Buildings Survey (HABS) standards established by the National Park Service, as detailed below:</p> <ul style="list-style-type: none"> • A HABS written report will be completed to document the physical history and description of the historical resource, the historic context for its construction and use, and its historic significance. The report will follow the standard outline format described in the Historic American Buildings Survey Guidelines for Historical Reports in effect at the time of recording. The report shall be prepared by a professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History. • Large-format, black and white photographs of the historical resource will be taken and processed for archival permanence in accordance with Historic American Building Survey (HAB), Historic American Engineering Record (HAER), and HALS (Historic American Landscapes Survey) Photography Guidelines in effect at the time of recording. The 	Prior to project implementation.	The project applicant.	The Director of Community Development.

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	<p>photographs shall be taken by a professional with HABS photography experience. The number and type of views required will be determined in consultation with the local jurisdiction.</p> <ul style="list-style-type: none"> • Existing drawings, where available, will be reproduced on archival paper. If existing drawings are not available, a full set of measured drawings depicting existing conditions will be prepared. The drawings shall be prepared by a professional who meets the Secretary of the Interior’s Professional Qualification Standards for Architecture or Historic Architecture. • The HABS documentation, including the written report, large-format photographs, and drawings, shall be submitted to appropriate repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. The documentation shall be prepared in accordance with the archival standards outlined in the Transmittal Guideline for Preparing HABS/HAER/HALS Documentation in effect at the time of recording. A professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History shall manage production of the HABS documentation. 			

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	<p>MM CUL-1.2: <u>Video Documentation.</u> Video documentation of the subject property will supplement HABS documentation by recording the exterior and interior of the industrial complex at 1200 – 1310 Memorex Drive, as it appears, prior to project implementation. Using visuals in combination with active narration, the documentation shall include as much information as possible about the spatial arrangement, circulation patterns, historic use, current condition, construction methods, and material appearance of the historic resource. The documentation shall be conducted by a professional videographer, preferably one with experience recording architectural resources, and produced in conjunction with a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior’s Professional Qualification Standards.</p> <p>It is recommended that the video documentation be preserved in an electronic format that is cross-platform and nonproprietary. Like HABS documentation, archival copies of the video documentation shall be submitted to appropriate repositories, such as the SCCHGS, Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. It may also be shared online via a freely accessible platform such as YouTube.</p> <p>MM CUL-1.3: <u>Interpretive Display.</u> Interpretive displays vary widely in size, style, construction, and information capacity. Specifications for a particular interpretive display should consider a number of factors, including but not limited to the nature of the resource, the intended audience, and the</p>			

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	<p>location of the display. Although typically located at the subject property, offsite interpretive displays may be appropriate in certain cases, such as when the property is not publicly accessible for security or other reasons. In all instances, interpretive displays should be conducted by an architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards, in coordination with an exhibit designer.</p> <p>Both onsite and offsite interpretive displays may be appropriate mitigation measures for the demolition of the industrial complex at 1200 – 1310 Memorex Drive. Onsite displays should be located in a prominent space, such as a lobby, where they may be viewed by employees and visitors to the property. Displays should be permanent and should address the history and architectural features of the industrial complex at 1200 – 1310 Memorex Drive and its operation during the property’s period of significance.</p> <p>Because of the nature of the proposed replacement project, however, the subject property may not be easily accessible by the public, and an offsite interpretive display may be recommended in place of or in addition to the onsite display. An offsite interpretive display should be located in a place with a connection to the subject property or its historical context. For example, the Computer History Museum in Mountain View may be an appropriate location for an interpretive display because of the substantial, contextual connection between the museum’s mission and the subject property’s significance within the development of the modern computer industry. The Computer History Museum also holds hundreds of Memorex Corporation artifacts and records in its</p>			

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	<p>repository, which would complement an interpretive display related to the subject property.</p> <p>MM CUL-1.4: <u>Oral History Collection.</u> Oral history is a method of gathering and preserving the memories of people and communities, including personal commentaries of historical significance. Best practices for performing oral interviews are outlined by the Oral History Association (OHA), which was founded in 1966 and serves as the principal membership organization for those involved in the field of oral history.</p> <p>The project will prepare an oral history collection that focuses on the operation of the Memorex Corporation between 1961 and 1971, when the subject property served as the company headquarters. To the extent feasible, at least one former employee of the Memorex Corporation who was employed at the subject property shall be interviewed. A list of guests at the Memorex at Fifty reunion, hosted at the Computer History Museum in Mountain View in 2011, may serve as a preliminary list of potential narrators.</p> <p>Oral history audio and visual files collected as part of a mitigation effort for the 1200 – 1310 Memorex Drive will be conducted by a professional oral historian and preserved in an accessible, electronic format and submitted to appropriate repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, Oral History Center at the Bancroft Library in Berkeley, and/or the Computer History Museum, which currently houses more than one hundred oral</p>			

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	<p>history interviews related to the development of the modern computer industry. In the event that no appropriate narrators are identified, or in the event that all potential narrators decline to participate, a memorandum will be prepared to document the project methodology and efforts.</p>			
<p>Impact CUL-2: The project may result in impacts to unknown subsurface cultural resources.</p>	<p>MM CUL-2.1: A Native American cultural resources monitor shall be on site to monitor all construction activities disturbing native soils. In the event that prehistoric or historical resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the Native American monitor and a qualified archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared by a qualified archaeologist in consultation with a Native American representative and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:</p> <ul style="list-style-type: none"> • Identify scope of work and range of subsurface effects (include location map and development plan), • Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found), • Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information), 	<p>During construction activities disturbing native soils. In the event a discovery is made, the archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits.</p>	<p>The project applicant.</p>	<p>The Director of Community Development.</p>

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	<ul style="list-style-type: none"> • Detail field strategy used to record, recover, or avoid the finds, determined in consultation with a Native American representative (photogs, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals. • Analytical methods, determined in consultation with a Native American representative (radiocarbon dating, obsidian studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.). • Report structure, including a technical and layman’s report and an outline of document contents in one year of completion of development (provide a draft for review before a final report), • Disposition of the artifacts, • Appendices: site records, update site records, correspondence, consultation with Native Americans, etc. 			
<p>Impact CUL-3: The project could disturb human remains, should they be encountered on the site.</p>	<p>MM CUL-3.1: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American</p>	<p>At the time a discovery is made.</p>	<p>The project applicant.</p>	<p>The Director of Community Development, Santa Clara County Coroner, and NAHC.</p>

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	Heritage Commission (NAHC) immediately. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.			
Geology and Soils				
Impact GEO-6: Paleontological resources could be encountered during construction.	MM GEO-6: In the event paleontological resources are discovered all work shall be halted within 50 feet of the find and a Paleontological Resource Mitigation Plan shall be prepared by a qualified paleontologist to address assessment and recovery of the resource. A final report documenting any found resources, their recovery, and disposition shall be prepared in consultation with the Community Development Director and filed with the City and local repository.	At the time a discovery is made.	The project applicant.	The Director of Community Development.
Hazards and Hazardous Materials				
Impact GEO-6: Construction workers could be exposed to contaminated soil and/or groundwater during excavation, grading, and construction activities. Future users of the site could be exposed to hazardous soil vapor.	MM HAZ-2.1: For on-site construction activities, the project shall implement the approved Soil Management Plan prepared for the site under the oversight of the Regional Water Quality Control Board. MM HAZ-2.2: For off-site construction activities associated with the underground transmission line, a qualified environmental specialist shall collect shallow soil samples within the areas of proposed construction activities and have the samples analyzed to determine if contaminated soil is present with concentrations above established construction/trench worker and residential thresholds. Once the soil sampling analysis is complete, a report of the findings will be provided to the Director of Community Development for review. The report shall indicate whether any off-site	During all construction activities.	The project applicant.	The Director of Community Development, Regional Water Quality Control Board, and SCCDEH.

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	<p>contaminated soils found during sampling are related to the known on-site contamination, or whether they are from a different off-site contamination source.</p> <p>If contaminated soils are found in concentrations above established regulatory environmental screening levels, and are determined to be related to the known on-site contamination, the project shall incorporate the off-site contamination into the approved Soil Management Plan for the site. If the off-site contamination is determined to be unrelated to the known on-site contamination, the applicant shall enter into the Santa Clara County Department of Environmental Health’s (SCCDEH) Voluntary Cleanup Program (VCP) to formalize regulatory oversight for remediation of contaminated soil to ensure the site is safe for construction workers and the public after development. The project applicant must remove contaminated soil in order to achieve detection levels acceptable to the SCCDEH. With approval of the SCCDEH, some of the contaminated soil may be allowed to be left in-place buried under hardscape and/or several feet of clean soil.</p> <p>The project applicant shall prepare and implement a Removal Action Plan, Soil Mitigation Plan or other similar report describing the remediation process and to document the removal and/or capping of contaminated soil. All work and reports produced shall be performed under the regulatory oversight and approval of the SCCDEH.</p>			

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Noise				
<p>Impact NOI-1.1: The project could expose adjacent land uses to excessive noise levels during construction.</p>	<p>MM NOI-1.1: The project shall implement a construction noise control plan to regulate the hours of construction, reduce construction noise levels emanating from the site, and minimize disruption and annoyance at existing noise-sensitive receptors in the project vicinity. The control plan would include the following controls:</p> <ul style="list-style-type: none"> • Construction activities shall be limited to hours between 7:00 a.m. and 6:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays. No construction is permitted on Sundays or Holidays. • Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment from adjacent properties. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps. • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • Unnecessary idling of internal combustion engines should be strictly prohibited. • Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate 	<p>During all construction activities.</p>	<p>The project applicant.</p>	<p>The Director of Community Development.</p>

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	<p>muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.</p> <ul style="list-style-type: none"> • Utilize "quiet" air compressors and other stationary noise sources where technology exists. • Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. • Control noise from construction workers' radios to a point where they are not audible at existing residential uses to the north of the project site. • The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance. • Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. 			

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	<p>Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.</p>			
<p>Impact NOI-1.2: To avoid impacts related to operation of the proposed data center, the project will be required to incorporate noise reduction measures into the project design.</p>	<p>MM NOI-1.2: The building shall include a rooftop screen wall reaching 14 feet in height above the roof, meeting a minimum surface weight of three pounds per square foot (such as one-inch-thick wood, ½-inch laminated glass, masonry block, concrete, or one-inch metal). The screen wall shall extend along the full length of the building’s southern façade, a minimum distance of 225 feet north of the southwestern corner of the building along the western façade, and a minimum distance of 135 feet north of the southeastern corner of the building along the eastern façade.</p> <p>MM NOI-1.3: Each chiller shall meet a sound power level goal of 100 dBA or less.</p> <p>MM NOI-1.4: Each generator shall meet a design goal of 70 dBA or less at a lateral distance of 23 feet and a height of five feet above ground under full load. Generators shall be tested one at a time during daytime hours only.</p> <p>MM NOI-1.4: Each generator shall be equipped with an exhaust silencer so that noise from the exhaust would not exceed 63 dBA at a lateral distance of 23 feet and a height of five feet above ground.</p>	<p>Prior to issuance of occupancy permit.</p>	<p>The project applicant.</p>	<p>The Director of Community Development.</p>

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Transportation				
<p>Impact TRN-1: The project’s vehicle miles traveled (VMT) per employee would be above the relevant significance threshold.</p>	<p>MM TRN-2.1: The project shall implement a TDM program sufficient to demonstrate that VMT associated with the project would be reduced to 14.14 or less per employee. The TDM program may include, but is not limited to, the following measures which have been determined to be a feasible method for achieving the required VMT reduction:</p> <ul style="list-style-type: none"> • Provide commute trip reduction marketing and education for all eligible employees. <ul style="list-style-type: none"> ○ Implement marketing campaign targeting all project employees and visitors that encourages the use of transit, shared rides, and active modes. Marketing strategies may include new employee orientation on alternative commute options, event promotions, and publications. Providing information and encouragement to use transit, share ride modes, and active modes, reducing drive-alone trips and thereby reducing VMT. • Provide a subsidized or discounted transit program for all eligible employees. <ul style="list-style-type: none"> ○ This strategy requires the project employer to subsidize transit passes for participating employees. • Provide a rideshare program for all eligible employees. 	<p>Prior to issuance of occupancy permit.</p>	<p>The project applicant.</p>	<p>The Director of Community Development.</p>

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	<ul style="list-style-type: none"> ○ Organize a program to match individuals interested in carpooling who have similar commute patterns. Strategy encourages the use of carpooling, reducing the number of vehicle trips and thereby reducing VMT. <p>The TDM program shall be submitted and approved by the Director of Community Development and shall be monitored annually to gauge its effectiveness in meeting the required VMT reduction. The TDM program shall establish an appropriate estimate of initial vehicle trips generated by the occupant of the proposed project and shall conduct driveway traffic counts annually to measure peak-hour entering and exiting vehicle volumes. The volumes will be compared to trip thresholds established in the TDM program to determine whether the required reduction in vehicle trips is being met. In addition to monitoring driveway volumes, a survey will be developed as part of the TDM program to determine actual mode splits for employees. The survey will also gather information on usage of individual TDM program components. The results of the annual vehicle counts and survey will be reported in writing to the Director of Community Development.</p> <p>If TDM program monitoring results show that the trip reduction targets are not being met, the TDM program shall be updated to identify replacement and/or additional feasible TDM measures to be implemented. The updated TDM program shall be subject to the same approvals and monitoring requirements listed above.</p>			

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	If monitoring and reporting demonstrates that the project is non-compliant (i.e., did not fulfill the requirements of the TDM program, meet the drive-alone reduction targets, etc.), the City as the enforcing agency may impose penalties including fines and/or permit limitations.			

Source: City of Santa Clara. *Final Environmental Impact Report for the Memorex Data Center*. October 2021.