



Quail Brush Genco, LLC

A Project Company of Cogentrix Energy, LLC

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March 8, 2012

Mr. Eric Solorio
Project Manager
California Energy Commission
Docket No. 11-AFC-3
1516 9th St.
Sacramento, CA 95814

DOCKET	
11-AFC-3	
DATE	<u>MAR 08 2012</u>
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Cogentrix Quail Brush Generation Project - Docket Number 11-AFC-3, Supplement 2 to the AFC

Dear Mr. Solorio:

Pursuant to the provisions of Title 20, California Code of Regulation, Quail Brush Genco, LLC, a wholly owned subsidiary of Cogentrix Energy, LLC, hereby submits the *Data Request Responses to Set 1 for the Quail Brush Generation Project*. The Quail Brush generation Project is a 100 megawatt natural gas fired electric generation peaking facility to be located in the City of San Diego, California.

These 58 responses were compiled in response to the Energy Commission's QUAIL BRUSH GENERATION PROJECT (11-AFC-3), Staff's Data Requests, 1 through 58, dated and posted on February 7, 2012. This document provides the additional information necessary to fulfill the Application for Certification data requests for the following technical areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Land Use
- Socioeconomics
- Traffic and Transportation
- Soil and Water
- Transmission System Engineering
- Worker Safety and Fire Protection

Please contact either me or Connie Farmer at (303) 980-3653 with any questions regarding this submittal.

Sincerely,

C. Richard Neff
Vice President – Environment, Health & Safety

COGENTRIX QUAIL BRUSH GENERATION PROJECT

Data Request Responses to Set 1 for
the Quail Brush Generation Project
(11-AFC-3)

March 2012



QUAIL BRUSH GENCO, LLC

Air Quality

1. Please provide copies of all substantive District correspondence regarding the Quail Brush Generation Project (QBG) permit application, including e-mails, within one week of submittal or receipt. This request is in effect until the final Commission Decision has been recorded.

Response:

The Applicant will submit all substantive District correspondence regarding the QBGP permitting applications within one week of submittal or receipt. Submittals of these materials will continue until the final Commission Decision has been recorded. To date, the Applicant has not received any substantive correspondence from the District.

2. Please provide a tabulated list showing expected emissions and Emission Reduction Credits (ERCs) indicating the proposed quantity of all ERC reductions, including their locations, in a quantity sufficient to fully mitigate the project's emissions (once combined with the results of Data Request #3), including appropriate mitigation ratios. Please show the current updated ERC certificate number(s) and former certificate numbers for certificates that have been recently split and/or re-issued in the name of the project.

Response:

As discussed in the Applicant's Initial Response to Staff's Data Requests 1 through 58, docketed February 27, 2012, the response to Data Request #2 is not yet available.

3. Please identify and quantify a complete package (when including data from Data Request #2) of proposed CEQA mitigation for non-attainment pollutants and precursor emissions. For example, proposed strategies to reduce emissions in the near vicinity of the project and the effectiveness of such strategies need to be explicitly identified by QBGP.

Response:

As discussed in the Applicant's Initial Response to Staff's Data Requests 1 through 58, docketed February 27, 2012, the response to Data Request #3 is not yet available.

4. Please provide the sulfur content (gr S/scf) of the lubrication oil for the engine.

Response:

Sulfur content of lube oils is typically not expressed in terms of gr S/scf, but rather in terms of percent by weight (% wt.). API Group I lube oils have sulfur specifications > 0.03% wt., while Group II and III lube oils have sulfur specifications of <0.03% wt. The Applicant prefers, and plans to use Group II/III lube oils.

Note the following with respect to the CEC background statement for SO₂.

Table F.1-9, Appendix F.1 of the AFC, presents the SO₂ emissions estimates based of fuel content and lube oil consumption for the Wartsila engines. The lube oil contribution to SO₂ emissions is based on the estimate provided by the engine manufacturer as referenced on Table F.1-9. This data, obtained from the manufacturer, was used in order to better estimate

total engine SO₂ emissions, i.e., an estimate based on natural gas fuel sulfur alone would most likely result in an under-estimation of emissions. The Applicant gathered several sources of information on lube oil consumption, which are presented in Table F.1-9 of the AFC. The Applicant understands that emissions may be over-estimated, but it was the Applicant's intent to present values that are based on data provided by the manufacturer to ensure consideration and evaluation of all potential impacts.

5. When ignition occurs, a portion of the oil is combusted, and a portion is contaminated and removed from the piston and collected in the lube oil sump. Please provide the quantity of lubrication oil that is combusted per hour (scf/hr).

Response:

According to correspondence from a representative of the manufacturer of the Wartsila engine, typically, each engine will consume approximately 1 gallon of lube oil per hour of operation.

6. Please explain the potential for using synthetic lubricating oil to further reduce SO₂ emissions.

Response:

True synthetic lube oils, which are PAO (polyalphaolefin, API Group IV) based, are basically free of sulfur. Group II/III oils specific for these engines cost on average about \$11 per gallon, whereas synthetic oils cost about \$25-26 per gallon. Using the maximum runtime per the application, results in an annual lube oil use of approximately 44,353 gallons. The cost differential between using synthetic oils in lieu of Group II/III mineral oils is approximately \$643,000 per year. The potential emission reduction, assuming no sulfur emissions from the lube oil, would be approximately 4.5 tons per year (tpy), which yields an approximate cost of \$142,900 per ton of SO_x reduced, and this cost would repeat every year. This level of cost for mitigating SO₂ emissions is well above what is reasonable for SO₂ mitigations costs, which in California (per the CARB ERC Transaction Report for 2010) show median costs per ton of approximately \$21,000, and average costs of \$22,341 per ton (which are typically one-time costs). The Applicant is not proposing to use synthetic oils.

7. Are manufacturer's guarantees or source testing information available to verify emissions for the 80.18 MMBTU/hr power cycle engine? If so, please provide this information.

Response:

The run case data presented in Table F.1-2, Appendix F.1, of the AFC are based on manufacturer's emissions guarantees. The emissions guarantees are presented for heat rates up to 80.18 mmbtu/hr, i.e., for the 100% load case.

8. Was the information for the 73 mmbtu/hr power cycle engine also used to calculate normal operations? If so, please provide the deriving calculations and assumptions used in converting emissions from the 73 mmbtu/hr engine to the 80.18 mmbtu/hr engine.

Response:

Emissions information applicable to steady-state and startup/shutdown were calculated based upon data applicable to the 20V34SG-C2 engine rated at 80.18 mmbtu/hr. This data showing the assumptions and calculations is presented in Tables F.1-1 and F.1-2, Appendix F.1 of the AFC. Data for an earlier version of the 20V34SG rated at 73 mmbtu/hr were not used for steady state or startup/shutdown emissions calculations.

Because the 20V34SG-C2 engine is the latest variant of the 20V34SG series, data on commissioning emissions were not available from the manufacturer. In addition, the Applicant is not aware of, nor could we identify, any existing facilities that are currently up and running using the –C2 engine variant for which commissioning emissions are available. The Applicant used data from the earlier variant rated at 73 mmbtu/hr, which were scaled up to the –C2 model, to produce estimates of emissions at various loads and scenarios, applicable to the commissioning phase only (see Table F.1-11, Appendix F.1 of the AFC).

9. Once the fuel gas heater and warm start heater are selected, please provide information confirming that actual emission factors are consistent with estimations provided from AP-42, Section 1.4, 7-98.

Response: Heaters of this size and duty are fairly common, and the Applicant is already working with a supplier (ETI Inc.). The current supplier has stated in correspondence that the revised NO_x and CO values for the burners supplied with the units will meet 40 ppmvd NO_x and 50 ppmvd CO at 3% O₂. These values were converted to lb/mmbtu, and the remaining emissions factors per AP-42, Section 1.4 were used to revise the heater emissions. Attachments 1 and 2 contain the revised emissions calculations for these units.

10. Please explain the warm start heater operating assumptions associated with 4,928 hours/year operation.

Response:

Each of the Wartsila power cycle engines is evaluated at an annual operations cycle of 4,032 hours per year, which includes start-ups and shutdowns. The warm start heaters essentially operate during the periods when the Wartsila engines are not operating, i.e., because the warm start heaters are used to pre-heat the engine cooling water, allowing the engines to achieve operating temperature faster during startup mode, and to maintain engine water minimum temperatures between operating cycles. At a minimum, the warm start heater would operate during those hours of the year that the Wartsila engines do not operate (i.e., 8,760 total hours per year - 4,032 operating hours per year = 4,728 hours per year for warm start heater operating). The additional hours (200 hours per year), which brings the annual operating hours to 4,928, was based on the best estimate by the Applicant to account for overlap hours, and was estimated without a well-defined operational and/or dispatch profile of SDG&E or CAISO. The Applicant believes 4,928 hours per year represents the maximum operations level for the heaters.

Please note, per the AFC, that the facility will have two warm start heaters, but only one heater will operate at any given time, and the total hours of operation for both heaters will not exceed 4,928 hours per year.

11. Please confirm that the air quality impact analysis [for the fire pump engine] used worst case emissions data.

Response:

Based on a review of the modeling input files, the maximum emissions of NO_x and PM₁₀ as presented in Table F.1-8 were used for the fire pump engine impact analysis. Thus, the air quality impact analysis used worst case emission data.

12. Please confirm that the fire pump engine has not yet been purchased. Also, describe the availability of currently-required Tier 4i diesel-fueled engine fire pumps in the size range needed for this project that are expected to be available at the time of purchase.

Response:

The fire pump system (engine) has not yet been purchased. The current proposed engine is rated at 144 bhp, and is manufactured by John Deere. The Applicant will purchase and use an appropriate engine for the fire pump system that meets the applicable Tier standards based on fuel type, HP rating, and year of purchase. Although the Applicant cannot predict the availability of Tier 4i engines, a review of data available from “*John Deere-Off Highway Diesel Engine Ratings Brochure, Interim Tier 4 Stage III B Engines*” indicates that a wide selection of Tier 4i engines will be available (see http://www.deere.com/en_US/docs/zmags/engines_and_drivetrain/services_and_support/engine_literature/interim_tier4_selection_guide.html).

13. Is there any source testing available for the Wartsila engine that would support the use of the 1.15% NO₂/NO_x ratio? If so, please provide this information.

Response:

The Applicant is not aware of any source test data for the Wartsila 20V34SG-C2 engines pertinent to establishing NO₂/NO_x ratios. In order to perform the various levels of compliance modeling for NO₂, a reasonable estimate of the in-stack NO₂/NO_x ratio must be made. For purposes of the QBGP NO₂ modeling, the Applicant’s modeling staff used the recommended ratio as presented in the Appendix C table in the “*Modeling Compliance of the Federal 1-Hour NO₂ NAAQS, CAPCOA Guidance Document, CAPCOA, 2011*”. The recommended NO₂/NO_x ratio for the QBGP power cycle engines was 1.15% (natural gas, IC engines, for a HP rating at 4175 using SCR and CO/VOC catalysts). The Applicant’s modeling staff believes this value is both appropriate and reasonable for use for the QBGP NO₂ modeling based on the following:

- The above noted CAPCOA guidance lists the recommended NO₂/NO_x ratios for all of the natural gas fired IC engines (non-compressor duty) from 120 to 4,175 bhp as being the “statistical average of all data points”. For the large engine listing (i.e., 4,175 bhp), the range of values as noted is 0.0 – 21.28%, with a statistical average of 1.15%. In order to obtain a statistical average of 1.15% from a range of values of 0.0 to 21.28%, a significant number of the data points have to be well below 1%, and we note that in this case, as well as other engine cases, many of the data ranges include “0.0” values. Values of 0.0 must be included in the data analysis, and in the case of the CAPCOA data, they were included. The proposed QBGP power cycle engines are lean burn, natural gas fired, medium speed design, with horsepower ratings of approximately

12,800 each. These engines will be equipped with both SCR and CO/VOC oxidation catalysts. As such, the Applicants modeling staff believes that an NO₂/NO_x ratio of 1.15% is a reasonable and justifiable value for use in the NO₂ compliance modeling analysis.

- The Applicant notes that the CAPCOA default value for the engine type and fuel is listed at 10%. This value was not used by the Applicant because it ignores the statistical average data presented for the larger engine categories (i.e., 4,175 bhp) and it represents a value that is approximately 8.7 times higher than the statistical average for this engine class. In other words, it ignores the fact that a large preponderance of data for this engine class were in the range of 0.0 to less than 1.0%.

The Applicant's consultant staff also reviewed a number of publicly available technical and research papers on the topic of NO₂/NO_x ratios. Our general comments on these are summarized below.

1. The Applicant, per the CAPCOA guidance (Section 7.2), consulted the EPA SCRAM webpage to ascertain if any new or recent data on any EPA generated NO₂/NO_x ratio databases were available. No such data was noted as of March 6, 2012.
2. A moderate amount of NO₂/NO_x ratio data obtained by the Applicant for this review were directly applicable to reciprocating engines. Although some of this data is not directly applicable to large lean-burn IC engines such as the proposed QBG engines, the data indicated the following:
 - a. The NFCRC Tutorial on Combustion indicates that NO production suddenly increases at temperatures around 2,800°F and thus an opportunity exists to control NO by staying below this temperature window. The tutorial also states that the formation of NO₂ is not significant during the combustion process, but that NO oxidizes to NO₂ in the atmosphere and thus all NO is potential NO₂. (see <http://www.nfcrc.uci.edu/EnergyTutorial/combustion.html>)
 - b. In Chapter 106 – Permits by Rule, the TNRC states in subchapter W, sections 106.511 and 106.512 that the default NO₂/NO_x ratio for engines emitting NO_x at less than 2.0 g/hp-hr is 0.4. The QBG engines emit NO_x at rates well below 2.0 g/hp-hr. The Applicant notes that the IC engine default values are very general in nature, and are not specific to any particular engine design, i.e., lean burn, rich burn, etc., nor are they specific to any fuel (gas or liquid), or add-on control technology. In addition, we note that these values were established based on information prior to the rule adoption date of 8-9-2000, thus the values do not, in the Applicant's opinion, represent current research for large lean burn natural gas fired IC engines equipped with SCR and oxidation catalyst controls.
 - c. In a technical presentation by ICAC dated 7/2008, a gross range of values for in-stack NO₂ is presented as 30-70% for a wide range of combustion devices such as turbines, diesel engines, 2 stroke engines, and reciprocating gas lean burn engines. No references accompany this presentation, so it not known where or how this data range was established, what accuracy levels the data range represents, or how old the data are that make up the data range. (*ICAC, Advances in NO_x Testing with Portable Analyzers, Advances in Emission Control and Monitoring Technology for Industrial Sources, July 2008*)
 - d. Data presented in a technical paper in the Journal of the Air and Waste Management Association (*Impact of Oxidation Catalysts on Exhaust NO₂/NO_x Ratio from Lean-Burn Natural Gas Engines, D.B. Olsen, et.al., JAWMA, Volume 60, July 2010*)

- indicates that: (1) high oxygen levels favor more conversion to NO_2 , whereas low oxygen levels favor more conversion to NO ; (2) for oxygen levels above 10%, which is the case for most lean-burn natural gas engines (including the QBGP proposed engines), the NO_2/NO_x ratio is relatively insensitive to oxygen level, therefore the dominant factor influencing equilibrium composition in lean burn natural gas engine exhaust is temperature. Data presented for a large lean burn, 4-stroke, natural gas fired engine (Waukesha 3521, rated at ~740 HP) indicated that the post-catalyst NO_2/NO_x ratio was 0.0. The value ranges are consistent with the range of values presented in the CAPCOA guidance document listed above. In addition, the paper indicates that post-oxidation catalyst NO_2/NO_x ratios decrease significantly across the catalyst. NO_2 to NO conversion ranges from 8.5 to 100%. In most cases, most of the NO_2 is converted to NO by the catalyst. The paper indicates that this conversion may be counter-intuitive because the function of the catalyst is “oxidation”, however oxidation catalysts for natural gas engines are designed to oxidize CO , VOCs , and aldehydes, and that NO_2 is a very effective oxidation agent.
- e. Data presented in EPA 454/R-00-037 (*Final Report-Volume 1, Testing of a 4-Stroke Lean Burn Gas-Fired Reciprocating Internal Combustion Engine to Determine the Effectiveness of an Oxidation Reduction Catalyst System for Reduction of HAPs Emissions, OAQPS, September 2001*) for a Waukesha 3512 GL lean burn, natural gas fired engine rated at ~738 HP, equipped with an oxidation catalyst, showed post-catalyst NO_2/NO_x ratios of 0.0%. The Applicant has reviewed the test data summaries presented in this report and has constructed the following table to show the various test measurements for NO , NO_x , and NO_2 for the pre- and post-catalyst scenarios. These data indicate that the in-stack NO_2 for the post-catalyst scenario is 0.0%.

Summary of NO, NO₂, and NO_x data from EPA 454/R-00-0037, Sept 2001.

PPM, wet								
Data/Run Case #	1	2	3	4	5	6	7	8
NO pre-cat	34.762	15.089	16.156	37.505	13.288	98.067	55.238	9.314
NO post-cat	90.771	60.962	60.266	85.112	58.462	168.311	117.94	47.021
NO ₂ pre-cat	52.508	43.941	41.465	47.879	43.621	67.85	60.557	38.29
NO ₂ post-cat	0	0	0	0	0	0	0	0
NO _x pre-cat	87.271	59.029	57.621	85.385	56.908	165.917	115.794	47.602
NO _x post-cat	90.771	60.962	58.79	85.112	58.462	168.311	117.94	47.021
Calculated values								
NO ₂ post-cat, ppm	0	0	-1.476	0	0	0	0	0
% NO ₂ pre-cat	60.2	74.4	72.0	56.1	76.7	40.9	52.3	80.4
% NO ₂ post-cat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PPM, wet								
Data/Run Case #	9	10	11	12	13	14	15	16
NO pre-cat	33.413	45.902	33.405	35.26	10.02	77.413	26.79	34.488
NO post-cat	89.705	104.997	89.422	90.195	52.452	145.274	79.062	90.15
NO ₂ pre-cat	52.027	57.475	52.693	53.089	39.757	63.298	49.092	52.342
NO ₂ post-cat	0	0	0	0	0	0	0	0
NO _x pre-cat	85.442	103.377	86.098	88.348	49.776	140.711	75.883	86.83
NO _x post-cat	89.705	104.997	89.422	90.195	52.452	145.274	79.062	90.15
Calculated values								
NO ₂ post-cat, ppm	0	0	0	0	0	0	0	0
% NO ₂ pre-cat	60.9	55.6	61.2	60.1	79.9	45.0	64.7	60.3
% NO ₂ post-cat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Assumptions:

1. NO_x = NO + NO₂, or variations of this equation for calculated values Avg % NO₂, pre-cat 62.5
2. NO₂ = NO_x – NO Avg % NO₂, post-cat 0.0
3. NO = NO_x - NO₂

The Applicant also obtained for review a number of publicly available articles, technical papers, and research summaries on the issue of NO₂/NO_x ratios. Most, if not all of these sources, addressed the ratio issue in general terms or in terms of application to devices such as turbines and boilers, and as such, little information related to reciprocating lean burn, 4-stroke, natural gas fired engines was gleaned from these sources. These sources and references are listed as follows:

1. APTI-EPA Combustion Evaluation Course #427, Control of Oxides of Nitrogen, (Acurex Corp.).
2. Energy, Technology, and the Environment, by Paul Ih-fei Liu, ASME Press, 2005 (ISBN 0-7918-0222-1), Chapter 4.
3. Clarkson College, Course text on "Thermodynamics of NO and NO₂ Formation", web2.clarkson.edu.
4. Observations of NO₂ Formation in Two Large NG Fired Boilers, IJPG2000-15103, V. Bland et. al., July 2000.
5. Tri-Mer Corporation, Tri-NO_x Control System Brochure, www.tri-mer.com, 2004.
6. University of Leeds, United Kingdom, An Investigation Into NO-NO₂ Conversion and CO Emissions from Gas Turbine Exhaust, Grant #GR/M20167/01, M. Pourkashanian, et.al., 2001.
7. Johnson Matthey, Gas Turbine Oxidation Catalyst Brochure, Combined and Simple Cycle Turbines, Stationary Emissions Control, 2009.
8. Engelhard-BASF, CatCO 600S Oxidation Catalyst Brochure, BF-8350, 02/2007.
9. The Combustion Institute, 27th Annual Symposium on Combustion, An Experimental and Kinetic Calculation of the Promotion Effect of Hydrocarbons on the NO-NO₂ Conversion in a Flow Reactor, M. Hori, et.al., Takushoku University, Japan, 1998.
10. 24th International Symposium on Combustion, Control of Combustion-Generated NO_x Emissions: Technology Driven by Regulation, C.T. Bowman, Stanford University, 2007.
11. 2000 International Joint Power Generation Conference, Observations of NO₂ formation in Two Large Natural Gas Fired Boilers, V. Bland, et.al., IJPGC2000-15103, 2000.
12. ASME, Combustion Characteristics and NO_x Formation of Gas Turbine System with Steam Injection and Two-Stage Combustion, Y. Ohno, et.al., Research Center for Advanced Energy Conversion, Nagoya University, Japan, 2000.
13. GE Oil and Gas-Nuovo Pignone S.p.A, A Simple Model for NO_x Formation in Diffusion Gas Turbine Combustors: Rig Test Validation with a Wide Range of Fuel Gases, S. Cocchi, et. al., not dated.
14. ASME Turbo Expo 2005, The Nature of NO_x Formation Within an Industrial Gas Turbine Dry Low Emission Combustor, K. Syed, et.al., 2005.
15. Personal Communication, Robert Finken, Delta Air Quality Services, 9/10/10.
16. Power Engineering Magazine, Progress Continues in Gas Turbine NO_x Control, J.C. Zink, Managing Editor, not dated.
17. GE Power Systems, Development of the GE Quiet Combustor and Other Design Changes to Benefit Quality, H. Miller, GER-3551.
18. GE Power Systems, Gas Turbine Emissions Control, R. Pavri, et. al., GER-4211, 2001.
19. ASME Turbo Expo, Advanced Gas Turbine Combustion System Development for High Hydrogen Fuels, J. Wu, et.al., GT2007-28337, 2007.

The Applicant concludes that based on the data presented above, the use of an in-stack NO₂/NO_x ratio of 1.15% per the CAPCOA guidance document for the proposed Wartsila 4-stroke, lean-burn, natural gas fired reciprocating engines, is a reasonable and appropriate value for use in the NO₂ compliance and impact modeling.

14. If not, please select a more appropriate NO₂/NO_x ratio (representative of the 12,874 HP lean burn Wartsila engine that would be utilized at the QBGP) for use in the Ozone Limiting Method for compliance with the Federal 1-hour NO₂ NAAQS and revise and resubmit modeling.

Response:

As described in the response to Data Request #13, the Applicant believes that the use of the 1.15% NO₂/NO_x ratio is appropriate for the proposed Wartsila engines. No additional modeling for NO₂ is proposed at this time.

15. Please explain the justification for rejecting AERMOD modeling system results and using a screening tool (CTSCREEN) to provide substantially lower results?

Response:

The AERMOD modeling system results were not rejected. Rather, a refined terrain impact model, the Complex Terrain Dispersion Model (CTDMPLUS) was used to refine the impacts in complex terrain just in the same manner the Ozone Limiting Method is used as a refined method for calculating NO₂ impacts. This is appropriate where, as here, the source is location in or near complex topography. AERMOD incorporates some of the refined complex terrain modeling techniques found in CTDMPLUS and in RTMD and is a vast improvement over the use of the COMPLEX I terrain algorithm used in ISCST3. Specifically, AERMOD uses the concept of a dividing streamline height algorithm where the model can calculate if a particular plume should go over a piece of terrain or around a piece of terrain. However, AERMOD does not incorporate the full suite of complex terrain algorithms and refinements found in CTDMPLUS. CTDMPLUS accounts for the three dimensional nature of plume and terrain interaction and thus, requires detailed terrain data representative of the modeling domain. AERMOD does not incorporate these types of data inputs or algorithms and thus, remains as a simplified method for the simulation of effects of plume and terrain interaction.

CTDMPLUS is a refined air quality model for use in all atmospheric stabilities with sources located in or near complex topography. Since the model accounts for the three-dimensional nature of plume and terrain interaction, it requires detailed terrain and meteorological data that are representative of the modeling domain. Although the terrain data may be readily obtained from topographic maps and digitized for use in the CTDMPLUS, the required on-site meteorological data may not be as readily available.

Since the meteorological input requirements of the CTDMPLUS can limit its application, the EPA's Complex-Terrain-Modeling, Technology-Transfer Workgroup developed a methodology to use the advanced techniques of CTDMPLUS in situations where on-site meteorological measurements are limited or unavailable. This approach uses CTDMPLUS in a "screening" mode – actual source and terrain characteristics are modeled with an extensive array of predetermined meteorological conditions.

This CTDMPPLUS screening mode (CTSCREEN) serves several purposes in regulatory applications. When meteorological data are unavailable, CTSCREEN can be used to obtain conservative (safely above those of refined models), yet realistic, impact estimates for particular sources. These estimates can be used to determine the necessity and value of obtaining on-site data for refined modeling, or can simply provide conservative emission-limit estimates. In addition, CTSCREEN can be a valuable tool for designing meteorological and pollutant monitoring programs.

It is important to note that CTSCREEN and the refined model, CTDMPPLUS, are the same basic model. The primary difference in their make-up is in the way in which CTSCREEN obtains the meteorological conditions. For example, wind direction in CTSCREEN is calculated based on the source-terrain-dividing streamline geometry to ensure computation of the highest impacts that are likely to occur. The daytime mixed layer heights are based on fractions of the terrain height. Other meteorological variables or parameters are chosen through a variety of possible combinations from a predetermined matrix of values.

As discussed in 40 CFR Part 51, Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule (November 9, 2005), CTDMPPLUS and CTSCREEN remain as the preferred models for use in complex terrain. As stated, CTSCREEN is actually a subset of the CTDMPPLUS modeling program with the only difference being that CTSCREEN incorporates worst-case synthetic meteorology, whereas the regulatory application of CTDMPPLUS requires the use of on-site meteorology collected in the area of study. Thus, in order to use CTDMPPLUS, we would need to collect at least one (1) year of meteorological data in areas of terrain where the application of CTDMPPLUS would be needed. In the absence of these data, CTSCREEN is the screening version of CTDMPPLUS and remains as the preferred model for refined impact analyses in complex terrain.

CTSCREEN uses an array of predetermined meteorological conditions to model the user-supplied source-terrain configuration. CTSCREEN yields estimates of maximum 1-hr, 3-hr, 24-hr, and annual impacts that are conservative with respect to CTDMPPLUS estimates using a full year of on-site data. In comparison with other complex terrain screening models, CTSCREEN provides estimates that most consistently reflect those of CTDMPPLUS. As a preferred EPA model, CTSCREEN can be used to obtain conservative, yet realistic worst-case impacts in areas of complex terrain.

CTSCREEN distinguishes between stable/neutral and convective conditions based on the value of the Monin-Obukhov length, L , and the mixed layer height, z_i . If L is positive or if $L < -100$ (and $L < 10$) then CTSCREEN assumes the plume is transported and diffused in a stable or neutral layer. The matrix of meteorological values selected to represent stable/neutral conditions is based on an analysis of:

- (1) Sensitivity tests of the model to the individual input variables,
- (2) Ten months of meteorological conditions observed at the Full Scale Plume Study Tracy site (Truppi 1986), and
- (3) A full year of data from the Widow's Creek monitoring study (Egan et al. 1985).

The stable/neutral algorithms of CTSCREEN require the following meteorological variables to compute concentrations:

- U -- wind speed at plume height (m/s)
- σ_v -- standard deviation of the lateral wind speed (m/s)
- σ_w -- standard deviation of the vertical wind speed (m/s)
- $d\theta/dz$ -- vertical potential temperature gradient (K/m)
- WD -- wind direction

The remaining meteorological inputs such as mixing height, surface roughness, friction velocity, and the Monin-Obukhov length need not be specified for the stable/neutral CTSCREEN since they only have a bearing on the vertical scaling of meteorological variables to plume height. The nature of CTSCREEN preempts the need for vertical scaling. The variables are simply assumed constant with height and the highest input level is set well above any stack or plume heights. Stack top temperature is defaulted to 293 K for all cases.

After examination of the five variables (above) through sensitivity tests and analysis of field data, a matrix of values was determined to adequately portray the conditions associated with "worst case" impacts.

This matrix of meteorology (with exceptions) results in 96 combinations to pass through the CTSCREEN model for each calculated or user-specified wind direction.

Wind direction in CTSCREEN is determined in an automated way. This is necessary because the geometry between the source and the fitted hill shape at the dividing streamline level, H_{crit} , (Snyder et al 1985) greatly influences the optimum (yielding highest impacts) wind direction. This geometry changes as each combination of meteorology yields a different H_{crit} , plume height, and cutoff hill height. So, with simple coding changes to CTDMPLUS, CTSCREEN computes the optimum wind direction for each combination of other meteorological variables in the matrix.

The meteorological variables used with CTSCREEN that represent conditions when convection is important ($[-100 < L < 0$ or $-z_i/L > 10]$ and stack height $< z_i$) or unstable conditions was based on an analysis of:

- meteorology associated with highest observed concentrations during eleven months of daytime conditions (that meet the above criteria) at the Westvaco site (Wackter and Londergan, 1984);
- meteorology associated with the highest CTDMPLUS predicted concentrations during the same daytime conditions at Westvaco; and
- sensitivity tests on CTDMPLUS for the important meteorological inputs to the model.

The daytime (convective) algorithms of CTSCREEN require the following meteorological variables to compute concentrations:

- U -- wind speed at half plume height (m/s)
- z_i -- mixing height (m)
- u^* -- friction velocity (m/s)
- L -- Monin-Obukhov length (m)

$d\Theta/dz$ -- potential temperature gradient above (K/m)
WD -- wind direction at half plume height
 θ -- ambient potential temperature at (K)
T -- ambient temperature at stack height (K)

Model-calculated wind direction is based on plume-hill geometry. Potential temperature at the mixed layer top and temperature at the stack top are both calculated internally by the model. CTSCREEN assumes a temperature of 293 K at the first tower level and extrapolates vertically with an assumed mixed layer $d\Theta/dz = 0$ ($dT/dz = - 0.0098$ K/m).

This leaves five meteorological variables to include in the "daytime" matrix: U, z_i , u^* , L, and $d\Theta/dz$ (above z_i). After examination of these five variables through sensitivity tests and analysis of field data, a matrix of meteorology results in a matrix of 108 combinations (simulations with the model) for each wind direction. When added to the stable/neutral cases, the total number of simulations is 204 (per wind direction) for each source/terrain combination

Often, the user of CTSCREEN is concerned about multiple sources and multiple terrain features. A generic procedure, designed to guarantee the determination of worst-case combined impacts from multiple sources, would require a prohibitively large number of simulations. Therefore, the workgroup decided that multi-source screening procedures would be handled on a case-by-case basis with the several options made available to the user to ensure effective implementation and provide adequate flexibility.

For this project, the model option (IAUTO=1) was selected to automatically calculate the maximum impact from all combined sources based on the optimum wind directions determined by the model for each individual source.

It is important to note that CTSCREEN model yields identical 1-hr concentration estimates to that of the refined CTDMPLUS for the same meteorological conditions. The conservative nature of CTSCREEN results from the use of a carefully selected range of meteorological conditions and appropriate conversions to 3-hr HSH, 24-hr HSH, and annual high estimates.

The results of the AERMOD analysis for 24-hour PM_{10} and $PM_{2.5}$ were used to identify areas in terrain directly surrounding the project area where the spatial pattern of plume impacts in complex terrain required refined modeling techniques. Three distinct areas of terrain were identified from the AERMOD results. The terrain in these areas was digitized in accordance with the CTSCREEN input requirements and receptors were placed along the digitized contours in and around the areas where AERMOD calculated impacts. Additional receptors were placed along all the digitized contours in order to determine the maximum impacts.

The use of CTSCREEN has been allowed on past CEC projects including the PG&E Humboldt Bay Repowering Project, approved by the CEC on September 24, 2008, and the SCE Mountainview Generation Station approved on March 21, 2001.

16. Once the District has responded, provide the list of sources to be included in the cumulative modeling analysis. This list should be presented and discussed by the Applicant, APCD, and CEC AQ staff.

Response:

As discussed in the Applicant's Initial Response to Staff's Data Requests 1 through 58, docketed February 27, 2012, the response to Data Request #16 is not yet available.

17. Please provide the cumulative modeling analysis after receiving CEC AQ staff approval of the modeling protocol and list of projects to be modeled.

Response:

As discussed in the Applicant's Initial Response to Staff's Data Requests 1 through 58, docketed February 27, 2012, the response to Data Request #17 is not yet available.

18. Please re-model the worst-case 24-hour PM₁₀/PM_{2.5} impacts using Phase 1 emissions rates or justify why the lower Phase 2 emissions rates were used.

Response:

The worst-case 24-hour PM₁₀/PM_{2.5} impacts were modeled using Phase 1 emissions rates. But the Phase I grading also includes fugitive emissions of PM₁₀ and PM_{2.5} of 12.55 and 1.90 lbs/day for a total Phase I PM₁₀ and PM_{2.5} emission rate of 21.98 and 11.24 lbs/day, respectively. The Phase II construction activities from the combustion sources are slightly higher, but the fugitive emissions are much lower. Thus, the combined Phase II PM₁₀ and PM_{2.5} emissions are 18.48 and 11.73 lbs/day, respectively. As is the case with modeling construction activity impacts on PM₁₀ and PM_{2.5} concentrations, the fugitive sources dominate the combustion emission impacts by a large margin. Thus, the Phase I modeling presented in the application represent the worst-case day for PM₁₀ and PM_{2.5} impacts. We have attached revised construction summary tables (Attachment C) that include additional data rows showing the emissions by Phase.

19. Please describe off-site linear construction activities including but not limited to: type of construction activity, emissions associated with linear construction, and duration of linear construction activities.

Response:

Offsite linears would be comprised of the following:

- a. The proposed new 6,850 feet gen tie from the plant site to the existing SDG&E Carlton Hills substation as noted on Data Response #21, and,
- b. The 2,200-foot underground natural gas supply pipeline.

As described in Appendix F.5 of the AFC, the linears will be constructed during Phase II, which is expected to last approximately 14.5 months. Some ground preparatory work for the linears may occur in Phase I. Table F.5-5, in Appendix F.5 of the AFC presents the Applicant's best estimate of construction equipment and use rates, by phase. This table includes those pieces of equipment scheduled for use on the linears. Construction emissions, as presented in Appendix F.5 of the AFC, were based on described construction phases, i.e., individual portions of construction such as the gen tie or gas line were not evaluated separately. The construction of the gen tie and interconnection facilities is

expected to take approximately 12 months, while the gas line is expected to take approximately 5 months. The gen tie line is primarily an above ground project involving tower pad construction, and access road construction, while the gas line is primarily a trenching project. All of the construction activities for the linears will occur within the defined phase periods. It should be noted that the gas line will be constructed by SDG&E, not the Applicant. The Applicant also notes that the proposed new configuration of the gen tie as presented in Data Response #21, will significantly reduce ground disturbance areas, as well as decrease the need for construction related equipment, so the emissions as presently estimated in Appendix F.5 of the AFC may be conservatively high based on these proposed changes to the Project.

20. Would there be a potential for reconductoring of transmission lines for the QBGP, and if so how would it affect project linear construction emissions?

Response:

The Applicant is not proposing to reductor the transmission lines for the QBGP and reductoring of the existing SDG&E 138kV transmission line that runs north of the Project site to the existing SDG&E Carlton Hills Substation is not required. As stated in Supplement 2 to the AFC that was docketed on February 8, 2012, emissions associated with the construction of the 138 kV gen tie and modifications to the existing Carlton Hills Substation would be less than the emissions associated with the construction of the 230 kV gen tie and the new off-site SDG&E switchyard.

The Second Addendum to Appendix A (C565) Cluster 1 and 2 Phase II Interconnection Final Study Report issued by CAISO (2-14-12), identified portions of the following two transmission lines that will be reductored: Escondido-Palomar Energy 230 kV line 1 and 2 (cost allocation 10% to QBGP), and Friars-Doublet Tap 138 kV line (cost allocation 30% to QBGP).

Reconductoring typically involves the use of mobile equipment such as puller and tensioning trucks, boom trucks, and reel transport trucks. Fugitive emissions of particulate matter can occur from vehicle use on the gen tie access roads, but these would be expected to be minimal due to the low speeds of the vehicles.

21. How would linear construction activities change with the alternative transmission line tie-in location?

Response:

The Applicant docketed Supplement 2 to the AFC on February 8, 2012, which addresses the new 138 kV gen tie proposed route and facilities. Potential air quality effects as a result of the new gen tie and laydown area would be less than the impacts described in Section 4.7 and Appendix F.5 of the AFC due to the following:

Data Request Responses to Set 1

Gen-tie Parameter	Previous Proposed	New Proposed
Onsite facility switchyard	230 kV	138 kV
Gen tie line	5,600 feet of 230kV line	6,850 feet of 138 kV line
Utility Switchyard	Construct new 230 kV switchyard	Use existing Carlton Hills substation
Gen tie access road	Construct 5,600 feet of new access roads	Construct 1,382 feet of new access roads

The qualitative differences are as follows:

1. The new 138 kV gen tie route is 1,250 feet longer than the old route, but the pads and disturbance areas for a 138 kV line are less than the pads and disturbance areas for the 230 kV line.
2. No new off-site utility switchyard will be required, as the Carlton Hills Substation already has a blank bay ready for installation of the necessary equipment, i.e., no ground work is required for the off-site switchyard. Therefore, the 5 acres of ground disturbance related to the construction of the previously proposed 230 kV off-site switchyard would be avoided. Approximately 4,218 feet of access roads will be eliminated from the construction schedule.

Biological Resources

22. Please specify the amount of total nitrogen deposition in kg/ha/yr in special status habitats and vegetation types for wet and dry deposition for the Quail Brush Generating Project. Please provide the complete citation for references used in determining this number.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide this information on March 8, 2012. However, on March 6, 2012 Cogentrix, Tetra Tech, Aerowest, Atmospheric Dynamics, and CEC staff held a technical conference call to discuss the approach to nitrogen deposition modeling and to determine if modeling could occur without project-specific 2012 field data. It was decided that an initial plot of project only deposition would be made that will be overlaid onto a geo-referenced map. The plot will show the general areal extent of the nitrogen deposition impacts and will include special status habitats that have been mapped as of the date of the data request. The results of this analysis may also be used to assess the areas for cumulative nitrogen deposition impacts. In the 20-day letter, Quail Brush stated that we expected to be able to provide this information by July 2, 2012. However, we believe that we can provide the initial plot on or before April 15, 2012.

23. Please provide an isopleths graphic over USGS 7.5 minute maps (or equally detailed maps) of the anticipated nitrogen deposition rates for the proposed project. The geographical extent of the nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance for vegetation communities and where the NO_x plume could affect Quino checkerspot butterfly habitat and occurrences including critical habitat.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide this information on March 8, 2012. However, on March 6, 2012 Cogentrix, Tetra Tech, Aerowest, Atmospheric Dynamics, and CEC staff held a technical conference call to discuss the approach to nitrogen deposition modeling and to determine if modeling could occur without project-specific 2012 field data. Based on the discussion, and including the data response above, the Applicant's technical staff will move forward to conduct modeling using historic data and USFWS designated critical habitat maps to produce an initial plot. We will model project deposition by assuming a single land characteristic type, similar to that done for the Pio Pico Energy Center Power Project. In the 20-day letter, Quail Brush stated that we expected to be able to provide this information by July 2, 2012. However, we believe that we can provide the initial plot on or before April 15, 2012.

24. Please also provide a cumulative impact analysis of the nitrogen deposition values in kg/ha/yr. Please identify other NO_x sources that were considered as part of the cumulative impacts analysis. Provide an isopleths graphic over USGS 7.5-minute maps of the direct nitrogen deposition values in the cumulative analysis and specify the cumulative nitrogen deposition rate in kg/ha/yr at any affected special status habitat and vegetation type. The geographical extent of the cumulative nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide this information on March 8, 2012. However, on March 6, 2012 Cogentrix, Tetra Tech, Aerowest, Atmospheric Dynamics, and CEC staff held a technical conference call to discuss the approach to nitrogen deposition modeling and to determine if modeling could occur without project-specific 2012 field data. Based on the discussion, the Applicant's technical staff will move forward to conduct cumulative modeling using the Pio Pico Energy Center Power Project as the additional cumulative project to be analyzed with QBGP. It is assumed that Otay Mesa and Palomar are already included in the regional background nitrogen deposition rates. The cumulative analysis will include the historic data and USFWS designated critical habitat maps to produce a cumulative isopleth map or habitat averages/maximums. In the 20-day letter, Quail Brush stated that we expected to be able to provide this information by July 2, 2012. However, we believe that we can provide the initial plot on or before April 15, 2012.

25. Please describe potential mitigation strategies (e.g. weed management) to decrease cumulative nitrogen deposition impacts to less than significant levels for any affected resources, particularly Quino checkerspot butterfly critical habitat, special status vegetation types (e.g. Coastal sage scrub), or other special status species habitat. Please provide the list of sources considered in the cumulative air quality impact analysis.

Response:

Quail Brush will be unable to provide this information on March 8, 2012. As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will provide the CEC with updates as further information becomes available.

26. Please provide on a map at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet (1:6,000) with a 30 percent overlap that show the proposed switchyard and temporary construction areas.

Response:

The map is included as Figures 1A and 1B.

27. Please provide the final determination from the USACE regarding whether or not jurisdiction will be asserted. Should the USACE assert jurisdiction, please explain the project-specific circumstances that would necessitate substantial temporary or permanent impacts to jurisdictional waters. If mitigation will be required, please discuss what suitable mitigation will likely be. Please provide the anticipated schedule of USACE permitting for (and verification of) jurisdictional waters.

Response:

Quail Brush submitted the Draft Waters and Wetlands Technical Report to the USACE on March 2, 2012, and anticipates receiving a reply within 30 days of the submittal date. Once the USACE has reviewed the report and agreed with its content, as stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Tetra Tech will, if deemed necessary by the USACE, complete a Determination Package and submit for a formal determination. If the USACE decides that a formal determination is required, Quail Brush will docket it with the CEC as soon as it is provided by USACE. If a formal determination is not required, Quail Brush will submit related documentation from the USACE regarding this decision.

28. Please provide on a map at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet (1:6,000) with a 30 percent overlap of location(s) of potential mitigation sites.

Response:

The map is included as Figures 2A and 2B.

29. Please conduct Quino checkerspot butterfly protocol surveys of the project following U.S. Fish and Wildlife Service Quino checkerspot butterfly survey protocol (February 2002) and provide the results of the field surveys.

Response:

The Quino checkerspot butterfly flight season began in the southern portion of San Diego County on February 3, 2012 within known monitoring locations. The beginning of the flight season for areas within the immediately vicinity of the project site were assumed to begin on or around February 10, 2012. However, weather conditions were not suitable to conduct protocol surveys until February 22, 2012. The first Quino checkerspot butterfly survey began

on February 23, 2012 and will continue for a minimum of 5 consecutive weeks, but may extend further if Quino checkerspot butterfly are still detected flying at nearby monitoring stations. As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, a final report of findings will be prepared according to USFWS protocol. The report of findings will be prepared no earlier than May 6, 2012 and no later than May 31, 2012.

30. Also please provide a map at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet with a 30 percent overlap depicting locations of any host plants, Quino checkerspot butterfly adults, and larvae found during surveys.

Response:

The appropriate graphics will be included as part of the report of findings mentioned above in Data Response #29 and will be submitted simultaneously.

Cultural Resources

31. Please provide a concise summary of the processual and historical geomorphology of the proposed project area and near vicinity. The summary need not be exhaustive.

Response:

The following text can be found in Section 4.16.1.1 of the Geological Hazards and Resources section of the AFC (page 4.16-2) and describes the geomorphology of the region as applicable to the APE:

“Prior to the middle of the Mesozoic era (about 180 million years before present [BP]), the region was covered by seas and thick marine sedimentary and volcanic sequences were deposited. During the Cretaceous period (138 to 63 million years BP) extensive mountain building occurred along with the emplacement of the Southern California batholith (crystalline/granitic rocks). During the early Tertiary (Paleocene Epoch - 55 to 65 million years BP) the San Diego coastal margin underwent uplift and erosion until the middle Eocene (40 to 50 million years BP) when sedimentary sequences of siltstone, sandstone, and conglomerates were deposited as part of several transgressive-regressive cycles. In the Project region, the Cretaceous batholithic/granitic rocks are unconformably overlain by Tertiary sedimentary deposits. The present-day mountain ranges were faulted and uplifted during the late Tertiary and Quaternary (5 million years BP to present time) (Sutch and Dirth 2003).”

32. Please provide the draft report of the supplemental archaeological fieldwork as identified in the Applicant’s November 7, 2012 submission. If additional time is needed to complete the fieldwork or report, please provide a schedule for completion of the fieldwork and date of report submission.

Response:

A portion of the supplemental archaeological fieldwork was completed January 3-10, 2012, however not all private parcels were accessible at that time (see Figure 3 for a map showing areas surveyed). This work was conducted within the survey area for the Project area described in Supplement 2 to the AFC, submitted to CEC on February 8, 2012. A confidential draft report documenting the results of the January 2012 fieldwork, entitled *Preliminary Results of a Supplemental Cultural Resources Survey for Quail Brush Genco, LLC's Quail Brush Generation Project, San Diego, California*, was docketed at the CEC under a confidentiality request on February 16, 2012.

Access to additional private parcels within the revised layout has been achieved (although not all parcels will be included). Therefore, additional supplemental survey work must be conducted and is currently planned for March 5-13, 2012. Figure 3 depicts areas requiring survey using the vegetation removal unit methodology described in the revised survey design docketed on November 7, 2011. Further, the additional fieldwork will include recordation and evaluation of the Sycamore Landfill, as requested in Data Request #34, below. A second supplemental report documenting the additional field efforts will be provided to the CEC under confidential cover no later than April 27, 2012.

33. Please provide historic contexts as they relate to the Old Mission Dam, Camp Elliot, and Sycamore Landfill and, respectively, to the local development of water control infrastructure in the Spanish Colonial era, the military use of the project area vicinity, and the local development of waste disposal systems.

Response:

Old Mission Dam

Historically in California, the first Euro-Americans to construct irrigation systems were Spanish colonists and one of the first systems was Old Mission Dam and its associated aqueduct or flume. From the start of the Spanish Colonial period beginning around 1770, missionaries and rancheros conducted agriculture and cattle ranching in Southern California. Most of the missions the Spanish established in California included an irrigation system. The systems however were limited by the region's irregular and fluctuating water supply as well as the amenability of the local labor supply, Native Americans. This, combined with the agricultural orientation of the missionaries made irrigation technologies necessary, including dry farming, runoff irrigation, floodwater farming, and major irrigation projects (JRP and CalTrans 2000:8).

It is unclear when construction of Old Mission Dam was initiated, but it was likely not until after AD 1800. The NRHP Nomination for the dam (Heintzelman and Snell 1983) assumes an initial construction date of 1803, with the final form, 220 feet long, 12 feet high, and 13 feet thick, being achieved by 1817. The dam is constructed of local cobblestones and cement and was intended to control the flow of San Diego River, forming a lake behind it. A wooden gate in the dam was removed during dry periods to allow water in the lake to flow the five miles downstream to the San Diego Mission. At the mission, the water was used for milling and domestic use. Much of the water was lost in river sands between the dam and the mission. To resolve this issue, a small tiled aqueduct was constructed to transport the

water. The system allowed for a year-round water supply at the mission. Although portions of the dam still exist, having been damaged by floods, the aqueduct no longer exists. The significance of the dam and aqueduct system lies in the possibility that they represent the first major irrigation-engineering project on the Pacific Coast of the United States.

The water distribution system of the San Diego region today mimics the technology of the Old Mission Dam irrigation system, utilizing a system of water reservoirs, water storage facilities, and transmission and distribution lines (City of San Diego 2008:PF-32).

Camp Elliot

Camp Elliot, named for Major-General Elliot, the tenth Commandant of the Marine Corps, is the third iteration of today's MCAS Miramar. Prior to be known as Camp Elliot the base was known as Camp Kearny (1917-1920) and Camp Holcomb (1934-1940). The base was not in use between 1920 and 1934. With each name change, base boundaries were re-drawn (Hector, et al. 2004:21). Camp Elliot (1940-1960) extended from Murphy Canyon Road on the west to Sycamore Canyon on the east, and from Pomerado and Beeler Canyon roads on the north to the San Diego River and Mission Gorge Road on the south (City of San Diego and Tierrasanta 2011:3). The Camp consisted of a 25,000-acre main cantonment and six auxiliary camps, and various training ranges. At the height of its operation, it included 25 ranges, five training areas for individual combat and tank maneuvers, two obstacle courses, a grenade court, a debarkation course, a combat reaction course, four bayonet courses, and a bayonet assault course (Hector, et al. 2004:21, 22). The project area was within the southeast corner of the Camp and was used as range (USGS 1952, 1953). This area was known as East Elliot.

Following construction of Camp Elliot facilities in 1940, three regiments were stationed at Camp Elliot in 1941: the 8th Regiment, the 1st and 2nd Battalions of the 10th Regiment, and the 2nd Regiment of the Marines. An additional five commands were quartered there as well: headquarters of the Fleet Marine Force, San Diego area; Fleet Marine Force Training Center; the Troop Training Unit, Amphibious Training Command, Pacific Fleet; the Marine Barracks, and the Base Depot. In 1942, the Camp was designated a fleet Marine Training Center and following the attack on Pearl Harbor, the Training Center rapidly grew. By 1943 over 50,000 Marines had trained there. However, when the Marines were transferred to nearby Camp Pendleton in 1944, the Navy took over the camp, using it as a training and distribution center for the remainder of World War II (Hector, et al. 2004:21-22).

After World War II, the National Guard's 251st Headquarters was based at the Camp. Over 150,000 naval recruits were trained at the Elliot Annex of the Naval Training Center between 1951 and 1953. Between 1953 and 1960, the Naval Retraining Command used the Camp. In 1961, 7,500 acres of Camp Elliot was acquired by adjacent Miramar (Naval Air Station at that time) (Hector, et al. 2004: 22, 23). Meanwhile, the 3,200 acres of the East Camp Elliot area was disposed of by the Navy the same (Military Museum 2012).

Sycamore Landfill

Note that this context may be expanded upon following completion of recordation and the CRHR-eligibility evaluation of the landfill (see Data Request #34).

This context for the Sycamore Landfill is based on more detailed information provided in the *Draft Environmental Impact Report for the Sycamore Landfill Master Plan* (BRG 2008).

Solid waste management is an important regional issue due to limited landfill capacity, urban encroachment, environmental concerns, environmental regulations, and the increased cost of developing and operating waste management facilities. Landfills and their role in refuse management are considered an essential government function in reducing health and safety threats. A primary component in the management of solid waste in the region and particularly in recent years is waste reduction. Historically, landfills have provided the primary method solid waste disposal. However, since the early 1990s, recycling and waste reduction have begun to play a larger role (County of San Diego 2011:3-38). The regional system of waste collection, removal, and disposal has evolved from the direct haul of waste to County or City-owned landfills, to a system that integrates waste management alternatives. The current methods include separate collection of refuse and recyclables, and in certain cases removal of recyclables from waste at transfer stations (County of San Diego 2005:SP-18).

The City of San Diego operates its own solid waste management system, which includes solid waste collection at and operation of the Miramar Class III (non-hazardous) sanitary landfill. A composting facility called the Greenery, a recycling facility, and hazardous waste collection facility are also located at this landfill. Allied Waste Industries, Inc. operates four active Class III sanitary landfills in the County at Sycamore Canyon, Otay, Ramona and Borrego. The company also operates seven rural bin site transfer stations in the County. Typically, cities in San Diego County use the regional landfills for their solid waste disposal. Some cities export varying portions of their solid waste to out-of-county disposal facilities (County of San Diego 2005:SP-16).

The majority of waste in the project region (incorporated and unincorporated San Diego County) is disposed of at the Miramar Landfill west of the project area. Remaining waste goes to six other landfills, including two privately-operated landfills: the Sycamore Landfill and the Otay Landfill (unincorporated San Diego County). The Sycamore Landfill is projected to last through 2033 and the Otay Landfill through 2025. All other landfills, including the Miramar Landfill, are owned by local jurisdictions. Two additional landfills are currently proposed in the region: the Gregory Canyon and Campo landfills (City of San Diego 2008:PF-38; County of San Diego 2011:3-38). Table C-1 from the County's Integrated Waste Management Plan (County of San Diego 2005:Table 4.5) outlines permitted disposal facilities in San Diego County. Figure 4 (County of San Diego 2005: Figure 4.1) depicts the location of the facilities.

Table C-1: Permitted Disposal Facilities in San Diego County

Facility	Description	Facility Address	Operator
Otay Annex SLF	Large Landfill	1700 Maxwell Road, Chula Vista	Allied Waste Industries, Inc.
Sycamore SLF	Large Landfill	14494 Mast Blvd., San Diego	Allied Waste Industries, Inc.
Borrego Springs SLF	Small Landfill	2449 Palm Canyon Dr., Borrego Springs	Allied Waste Industries, Inc.
Ramona SLF	Small Landfill	20530 Pamo Rd., Ramona	Allied Waste Industries, Inc.
Miramar SLF	Large Landfill	5180 Convoy St., San Diego	City of San Diego
Las Pulgas SLF	Small Landfill	TB 403-B Basilone Rd., Camp Pendleton	Camp Pendleton Marine Corps
San Onofre SLF	Small Landfill	TB 403-C Basilone Rd., Camp Pendleton	Camp Pendleton Marine Corps

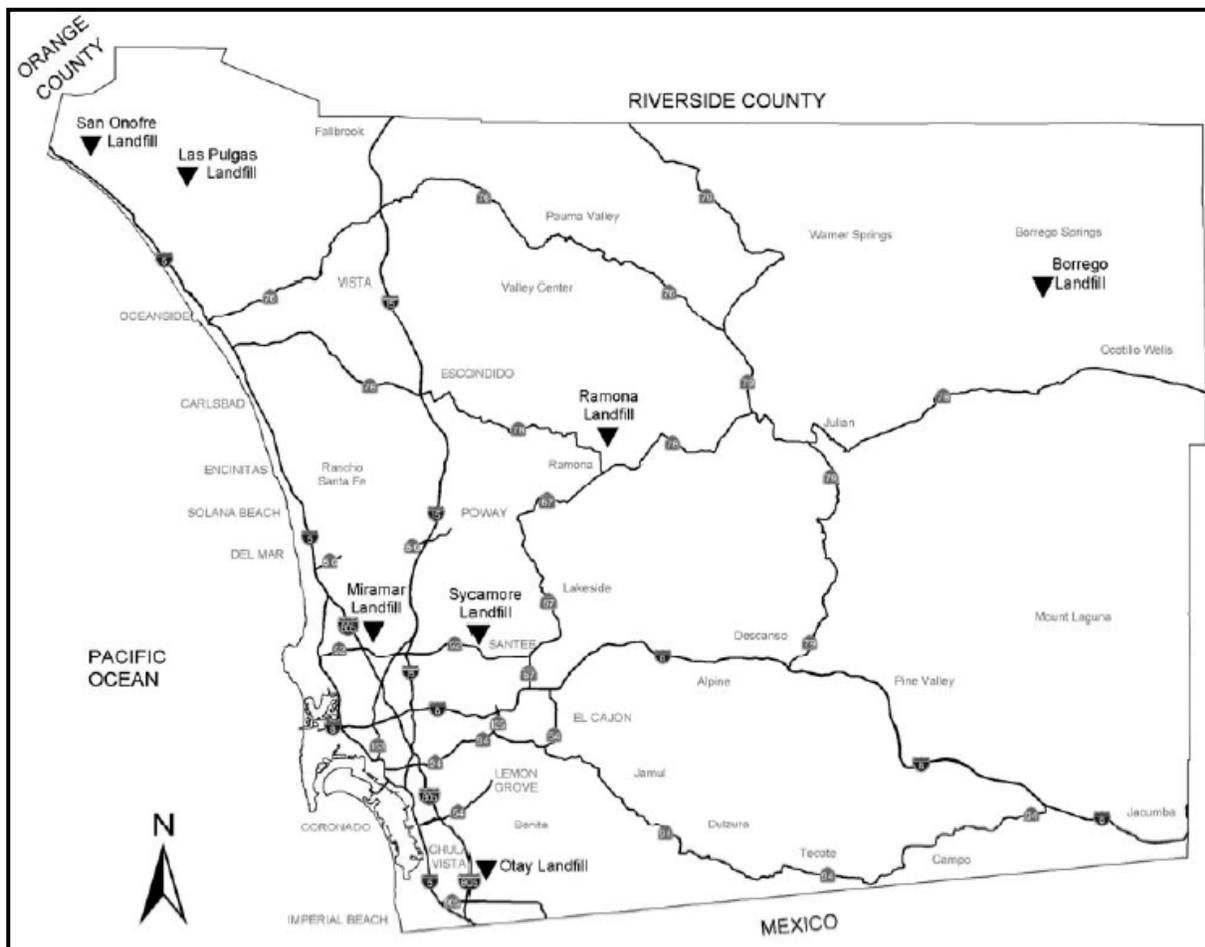


Figure 4. Permitted Landfill Locations in San Diego County

The Sycamore Landfill accepts City waste and handles approximately one-third of the current waste generated in the City of San Diego. The landfill was initially permitted in 1963 when the City issued Conditional Use Permit (CUP) #6066 to the County of San Diego, who owned the site at that time. The CUP authorized the County to construct and operate a sanitary landfill on 113 acres within Little Sycamore Canyon. The CUP was amended in 1974 to increase the size to 493 acres and approved a plan to eventually fill the entire canyon with solid waste. The County continued to operate the landfill until 1982. At that time, a private contractor was hired to operate the landfill. In 1997, Allied Waste Industries purchased the property and landfill business as part of a purchase of all County-owned solid waste assets. Today, the landfill is owned and operated by Sycamore Landfill Inc., a subsidiary of Allied Waste Industries pursuant to a Franchise Agreement with the City. This agreement states that Sycamore Landfill will provide capacity for City residential waste following closure of the City's Miramar Landfill, currently scheduled for 2012 (2017, pending approval of applications). Attachment D provides a list of granted permits and other government actions associated with Sycamore Landfill to document the landfill's history of development (BRG 2008:1-1, 2-1). As of 2008, approximately 150 acres (Figure 1B) have been disturbed by prior and on-going landfill operations (BRG 2008:2-1).

The landfill is operated as a Class III municipal solid waste landfill for disposal of non-hazardous waste. Class III landfills are defined as those that meet specific siting design and construction criteria for geologic setting, flood protection, seismic environment, and liner and leachate collection systems. Such landfills are typically designated for municipal solid waste and inert waste disposal (BRG 2008:2-3 – 2-4).

The existing major support facilities at Sycamore Landfill include (BRG 2008:2-4, 2-8):

- Entrance facility consisting of two scales, a scale house, and administrative office buildings;
- A paved two-lane, one-mile long landfill access road;
- Steel storage container to temporarily store intercepted hazardous materials;
- Equipment maintenance area, where routine maintenance on landfill operations equipment is performed from mobile service vehicles;
- Two sedimentation basins to capture surface runoff;
- Above-grade 12,000 gallon diesel fuel tank and a second diesel fuel tank;
- Landfill gas flare and cogeneration facility, operated by a third-party company;
- A recycling area near the main landfill entrance, operated by a third party;
- An aggregate processing facility within the landfill footprint, operated by a third party; and
- A greens/wood materials processing operation on the active landfill area where materials are ground and/or shredded for use as Alternate Daily Cover or other beneficial reuse.

34. Please provide an evaluation of the Sycamore Landfill as a potential historical resource on the appropriate DPR 523 form(s). Or, alternately, please provide a compelling rationale for why the landfill should not be subject to such an evaluation.

Response: The landfill will be documented on DPR 523a (Primary), b (Building, Structure, or Object), j (Location Map), and k (Sketch Map) forms and evaluated for CRHR eligibility and results submitted with an additional supplemental cultural resources report, as described in the response to Data Request #32.

Land Use

35. Please provide sufficient information (APN, address, and/or cross-streets) to identify the exact location of the proposed construction personnel parking area on Mission Gorge Road.

Response:

As shown in Supplement 2 to the AFC docketed on February 8, 2012, Figure 1.1-1 (Project Layout) depicts the location of the proposed construction personnel parking area on Mission Gorge Road. The proposed parking is located on two Assessor Parcel Number (APN) parcels: 38326075 and 38326076.

The proposed construction parking will be located at 7927 Mission Gorge Road. The proposed parking area is bounded by Mission Gorge Road to the north, Caribbean Way to the east, Rancho Fanita Drive to the west, and Wistful Vista is located further south of an undeveloped parcel located immediately south of the proposed parking area.

36. For the Mission Gorge Road property, please identify existing land uses and the City of Santee's applicable zoning and General Plan land use designations.

Response:

The proposed construction parking lot is currently used as a parking lot and is designated for commercial use. As shown in Figures 4.2-2 and 4.2-3 (General Plan Land Use Designations and Zoning Designations, respectively), the City of Santee's General Plan Land Use designation for this property is General Commercial GC, and the zoning is designated as General Commercial.

37. After finalization of the proposed location of the five-acre laydown and parking area on Sycamore Landfill property, please provide a map showing the location of this area in relation to the project site.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, and also explained in Quail Brush's Supplement 2 to the AFC docketed on February 8, 2012, Quail Brush proposes to use a yet to be identified 5-acre area within the 20-acre laydown site located approximately two-thirds of a mile north of the plant site and depicted on Figure 1.1-1 (Project Layout) of Supplement 2 (also see Figure 1B in this document). Due to the fact the 20-acre site is part of the active landfill, it will not be possible to identify the specific 5 acres that will be available and appropriate for use as a laydown and parking area until closer to the start of construction. Given the uniform nature of the 20-acre site, we do not believe that the identification of any specific 5-acre acre of the site would alter the potential environmental impacts associate with the project. Therefore, Quail Brush asks the CEC Staff to analyze Quail Brush's usage of any 5 acres within the designated 20-acre site.

38. Please provide copies of the application materials submitted to the City of San Diego for the Conditional Use Permit (CUP) and Site Development Permit (SDP) review.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush is unable to provide these materials. Quail Brush will file these applications with the City and will then docket the applications with the CEC. The initiation package submitted to the City of San Diego is included as Attachment E.

Socioeconomics

39. Please provide an estimation of the project's applicable square footage and the school impact fees for the project for the Grossmont Union High School and the Santee School District.

Response:

The occupied building footprint will be 29,000 square feet, therefore the school impact fee for the Grossmont Union High School will be \$4,640 and the school impact fee for the Santee School District will be \$8,410.

Soil and Water Resources

40. Please provide a conceptual hydromodification plan which shows what methods will be used to satisfy the requirements of the City of San Diego pertaining to the collection and discharge of stormwater from the project site as well as management of off-site flows.

Response:

As stated in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide this plan on March 8, 2012. The details for the type and placement of the stormwater control measures, including both best management practices (BMPs) and low impact development design features are currently being developed. Following the receipt of any additional information from the City of San Diego, the stormwater control measures will be adjusted as needed and a preliminary hydromodification management plan will be developed.

Traffic and Transportation

41. Please provide the sources used to obtain this information for each jurisdiction (i.e., SANDAG, Caltrans, City of San Diego, and City of Santee) including names of agencies with ownership of the documents, the document titles, and page numbers.

Response:

The sources of these data are as follows:

- The SANDAG data were obtained from the SANDAG Congestion Management Program (adopted in January 2003), as cited in the Sycamore Landfill Master Plan Draft EIR (Sycamore Landfill, 2008) page 4.4-13.
- The Caltrans data were obtained from The Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans, 2002) page 1.
- City of San Diego data were obtained from the City of San Diego Significance Determination Guidelines Under CEQA (August 2006), as cited in the Sycamore Landfill Master Plan Draft EIR (Sycamore Landfill, 2008) page 4.4-12.
- City of Santee does not currently have formal published significance criteria, but bases its standard of practice on the published SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region (March 2000) as cited in the Sycamore Landfill Draft EIR (Sycamore Landfill, 2008) page 4.4-11.

42. Please provide a traffic impact analysis that utilizes more recent baseline data from a reliable source.

Response:

Per a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved on February 14, 2012. The traffic impact analysis dated January 19, 2012 was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012. In this traffic impact analysis, AM and PM peak hour intersection turning movement volume counts were conducted in April 2011 and September 2011. Average daily traffic volume counts were conducted in March 2011 (See Traffic Impact Analysis, page 7).

43. Please provide updated information regarding the development status of the Sycamore Landfill Expansion project.

Response:

As discussed in the 20-day letter for the Applicant's Initial Response to Staff's Data Requests 1 through 58, docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide information regarding status of the Sycamore Landfill's project on March 8, 2012 as we are not involved with this project and we are unaware of any information that has been made available to the public.

44. Please provide information showing how trip numbers add up to or correlate with traffic numbers listed in Table 4.4-6.

Response:

As discussed on February 29, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. The trip numbers in this table are a summary of more detailed trip information contained in AFC Section 2.3.13 and specifically from Tables 2.3-3 and 2.3-5 of the AFC.

45. Please provide information showing how trip percentages add up to 100 percent.

Response:

Per a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved on February 29, 2012. As noted in the AFC text associated with Table 4.4-8 the information was "very preliminary". Subsequent to the filing of the AFC, a traffic analysis for the project was conducted. The traffic impact analysis dated January 19, 2012 was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012. Information in Section 7.0 of the traffic impact analysis provides more complete and accurate information on projected traffic distribution. This information, particularly the construction traffic distribution shown in Figures 7-1 and 7-2, supersedes the preliminary information in Table 4.4-8 of the AFC and adequately addresses this comment<provides the necessary information related to trip percentages.

46. Please identify why SR 125 and SR 67 are not considered as potential routes for accessing the project site.

Response:

As discussed on February 29, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. Subsequent to the filing of the AFC, a traffic analysis for the project was conducted. The traffic impact analysis dated January 19, 2012 was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012, includes 2012 traffic using SR 125 and this analysis satisfactorily resolves this comment.

47. Please provide calculations used to reach the conclusion that construction traffic would comprise less than 4 percent of 2009 peak hour trips on SR 52 in the project area.

Response:

As discussed on February 14, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. As explained in the traffic impact analysis dated January 19, 2012 that was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012.

48. Please provide calculations used to reach the conclusion that construction traffic would not increase the V/C ratio on SR 52 above the 0.01 threshold.

Response:

As discussed on February 14, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. As explained in the traffic impact analysis dated January 19, 2012, that was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012.

49. Please provide calculations used to reach the conclusion that construction traffic would comprise less than 2 percent of 2009 peak hour trips on West Hills Parkway in the project area.

Response:

As discussed on February 14, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. As explained in the traffic impact analysis dated January 19, 2012 that was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012.

50. Please provide calculations used to reach the conclusion that construction traffic would not result in significant impacts on Mission Gorge Road in the project area.

Response:

As discussed on February 14, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. As explained in the traffic impact analysis dated January 19, 2012 that was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012.

51. Please provide explanation as to why the Castlerock and Fanita Ranch projects would not contribute to cumulative traffic impacts during construction activities.

Response:

As described in the traffic impact analysis that was included as Attachment 1 in the Applicant's Action Item Response Memo docketed on January 23, 2012, Linscott, Law, and Greenspan Engineers conducted research within the City of San Diego and the City of Santee to determine potential cumulative projects that could add traffic to the study area. There are other planned projects in the areas adjacent to the project site, such as the Castlerock and Fanita Ranch projects. However, none of these projects are expected to be built and generating traffic within the QBGP scheduled construction period. Therefore no cumulative projects were included in the analysis.

52. Please provide the estimated average and peak traffic generated by construction activities and trip distribution for the SR 52 Expansion Project.

Response:

The "SR 52 Expansion Project" is the freeway expansion project that connects I-15 to SR 67. This project is complete and the SR 52 extension through Santee opened on March 29, 2011. Therefore no conflict will occur during the proposed project construction period. Actual data have been used in the traffic analysis.

53. Please provide the existing average daily truck trips along Sycamore Landfill Road generated by operations at the Sycamore Landfill.

Response:

As discussed on February 29, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, Quail Brush does not have access to these data, as this is a private road.

54. Please identify and quantify (e.g., changes in LOS, V/C ratio, delay) any potential impacts the Quail Brush project could create when its construction traffic is combined with existing truck traffic generated by Sycamore Landfill operations. Please discuss feasible mitigation for any significant cumulative impacts.

Response:

As discussed on February 14, 2012 in a technical conversation between John Hope, CEC, and Ron Versaw, Tetra Tech, this issue was resolved. As explained in the traffic impact analysis dated January 19, 2012 that was included as Attachment 1 in the Applicant's Action Item Response Memo, docketed on January 23, 2012.

Transmission System Engineering

55. Provide a physical layout drawing of the QBGP 230/13.8 kV switchyard showing all major equipment (generators, buses, transformers, breakers and disconnect switches etc.) and transmission line outlet(s).

Response:

The Applicant docketed Supplement 2 to the AFC on February 8, 2012, which addresses the new gen tie proposed route and facilities. Since the Project Point of Interconnection is no longer 230kV, the QBGP 230kV/13.8 switchyard associated with the Project will become the 138 kV switchyard. The GSUT (138/13.8 kV) is outside the switchyard boundary. The QBGP switchyard will be located on the QBGP site immediately north of the power block. The physical layout drawing of the QBGP 138 kV switchyard is included as Attachment F. The new Point of Interconnection is the 138 kV bus at the existing SDG&E Carlton Hills Substation. Attachment G is a plan of the Carlton Hills Substation. SDG&E will proceed with design of the Carlton Hills Substation modifications once the final gen tie route has been selected.

56. Resubmit your Drawing Exhibit 2 and provide a clear design diagram of the proposed underground 230 kV single circuit cable termination/riser steel pole showing configuration of the phase conductors & insulators, aluminum/PVC conduits & conduit adapters, insulated 230 kV cable rise and cable terminators/pothead, surge arresters, and post insulators (if any) with their respective position measurements on the pole.

Response:

The Applicant docketed Supplement 2 to the AFC on February 8, 2012, which addresses the new gen tie proposed route and facilities. The detail design of the final gen tie route (Refer to Supplement 2 Figure 1.1-1 Project Layout for alternates) will not include an underground cable crossing of the existing 138kV SDG&E transmission line. Should a crossing be required, it will be accomplished by crossing underneath the existing SDG&E transmission lines but above the ground and maintaining required clearances between the closest phase conductors of both lines and phase conductor to ground.

57. For the proposed 230 kV underground cable line, submit design diagram of the Duct Bank construction details which would be embedded in concrete base showing its depth and width below the ground level and configuration of a single circuit 230 kV cable line with three single core insulated cables (with provision of a spare cable, if necessary) including grounding & communication cables within PVC conduits with their sizes and respective position measurements. Provide the depth of the concrete base from the ground surface and positions of the warning tapes.

Response:

See response to Data Request #56.

Worker Safety and Fire Protection

58. Please provide a letter, email, or record of conversation with the SDFRD that confirms the absence, or mitigation, of any expected impacts on the local fire district resulting from construction and operation of the proposed project. This should consider new funding of the Department through property tax revenue changes resulting from the project.

Or, in the absence of a letter or communication confirming agreement between the Applicant and the SDFRD, please provide a Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment for the construction and operation of the project that provides an objective estimate of both equipment and staffing shortfalls (if any) and the associated recommended mitigations (if any) that would be required by SDFRD to maintain adequate level of readiness to respond to the public.

The Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment should take into account the guidance provided by NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments and by NFPA 551: Guide for the Evaluation of Fire Risk Assessments. The Fire Protection and Emergency Services Needs Assessment should address emergency fire and medical response and equipment, staffing, and location needs while the Risk Assessment should be used to establish the risk (chances) of significant impacts occurring. The Fire Protection and Emergency Services Needs Assessment and Risk Assessment should evaluate the following: (a) the risk of impact on the local population that could result from potential unmitigated impacts on local fire protection and emergency services (i.e. "drawdown" of emergency response resources, extended response times, etc.) and (b) recommend an amount of funding that should be provided and used to mitigate any identified impacts on local fire protection and emergency medical response services.

Response:

As discussed in the 20-day letter for Data Requests 1 through 58 docketed at the CEC on February 27, 2012, Quail Brush will be unable to provide a response to this data request on March 8, 2012. Quail Brush met with the City of Santee Fire and Rescue Department on March 7, 2012 to discuss potential impacts on the local fire district.

References

Caltrans. 2002. Guide for the Preparation of Traffic Impact Studies. State of California Department of Transportation. December 2002. Available at http://www.dot.ca.gov/hq/tpp/offices/ocp/iqr_cega_files/tisguide.pdf.

Sycamore Landfill. 2008. Sycamore Landfill Master Plan Draft Environmental Impact Report.

Figures

Figure 1A. Carlton Hills Substation

Figure 1B. Proposed Construction Laydown Area

Figure 2A. Potential Mitigation Sites

Figure 2B. Potential Mitigation Sites

Figure 3. Quail Brush Survey Areas

Figure 4. Permitted Landfill Locations in San Diego County

Attachments

Attachment A. Fuel Gas Heater Calculations

Attachment B. Warm Start Heater Calculations

Attachment C. Revised Construction Summary Tables

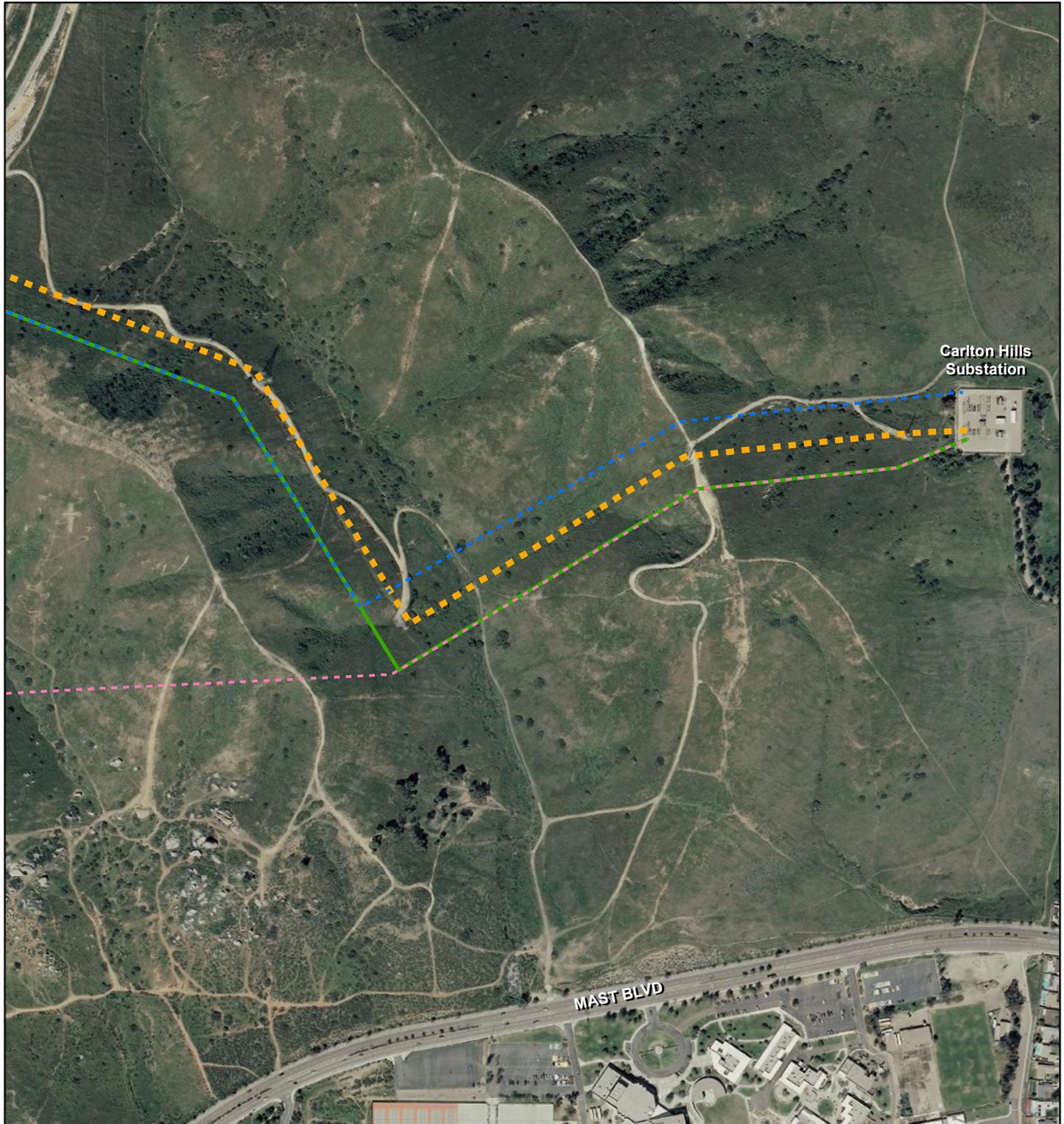
Attachment D. Sycamore Landfill Permit History

Attachment E. City of San Diego Initiation Application

Attachment F. Quail Brush 138 kV Facility Switchyard Layout

Attachment G. Carlton Hills 138 kV Substation Plan

FIGURES



Carlton Hills
Substation

MAST BLVD

Legend

- - - Gentie Route Alternative 1
- - - Gentie Route Alternative 2
- - - Gentie Route Alternative 3
- Preferred Gentie Route
- - - Existing SDG&E 138 kV T-Line



QUAIL BRUSH GENERATION PROJECT

FIGURE 1A CARLTON HILLS SUBSTATION

0 250 500 1,000



Feet



TETRA TECH EC, INC.





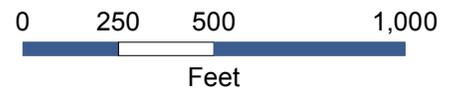
Legend

-  Proposed Construction Laydown Area
(5 acres within this 20 acre area)
-  Preferred Gentie Route
-  Gentie Route Alternative 1
-  Gentie Route Alternative 2
-  Gentie Route Alternative 3
-  Existing SDG&E 230 kV T-Line (2)
-  Existing 138 kV SDG&E T-Line



QUAIL BRUSH GENERATION PROJECT

**FIGURE 1B
 PROPOSED CONSTRUCTION
 LAYDOWN AREA**



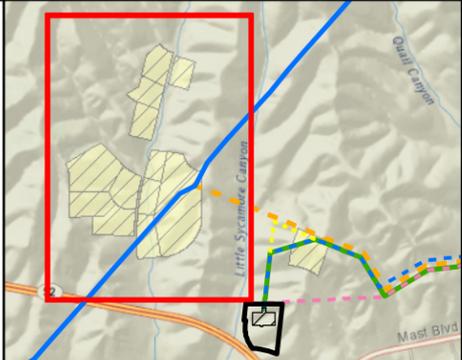
TETRA TECH EC, INC.





Legend

- Potential Mitigation Sites
- Existing SDG&E 230 kV T-Line (2)
- Existing SDG&E 138 kV T-Line



QUAIL BRUSH GENERATION PROJECT

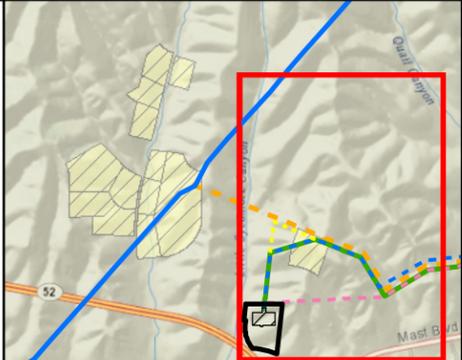
**FIGURE 2A
POTENTIAL MITIGATION SITES**

0 250 500 1,000
Feet

TETRA TECH EC, INC.



- Potential Mitigation Sites
- Project Boundary
- Plant Site
- Preferred Gentie Route
- Gentie Route Alternative 1
- Gentie Route Alternative 2
- Gentie Route Alternative 3
- 20 acre Site (5 acre Construction Laydown)
- Existing SDG&E 230 kV T-Line (2)
- Existing SDG&E 138 kV T-Line

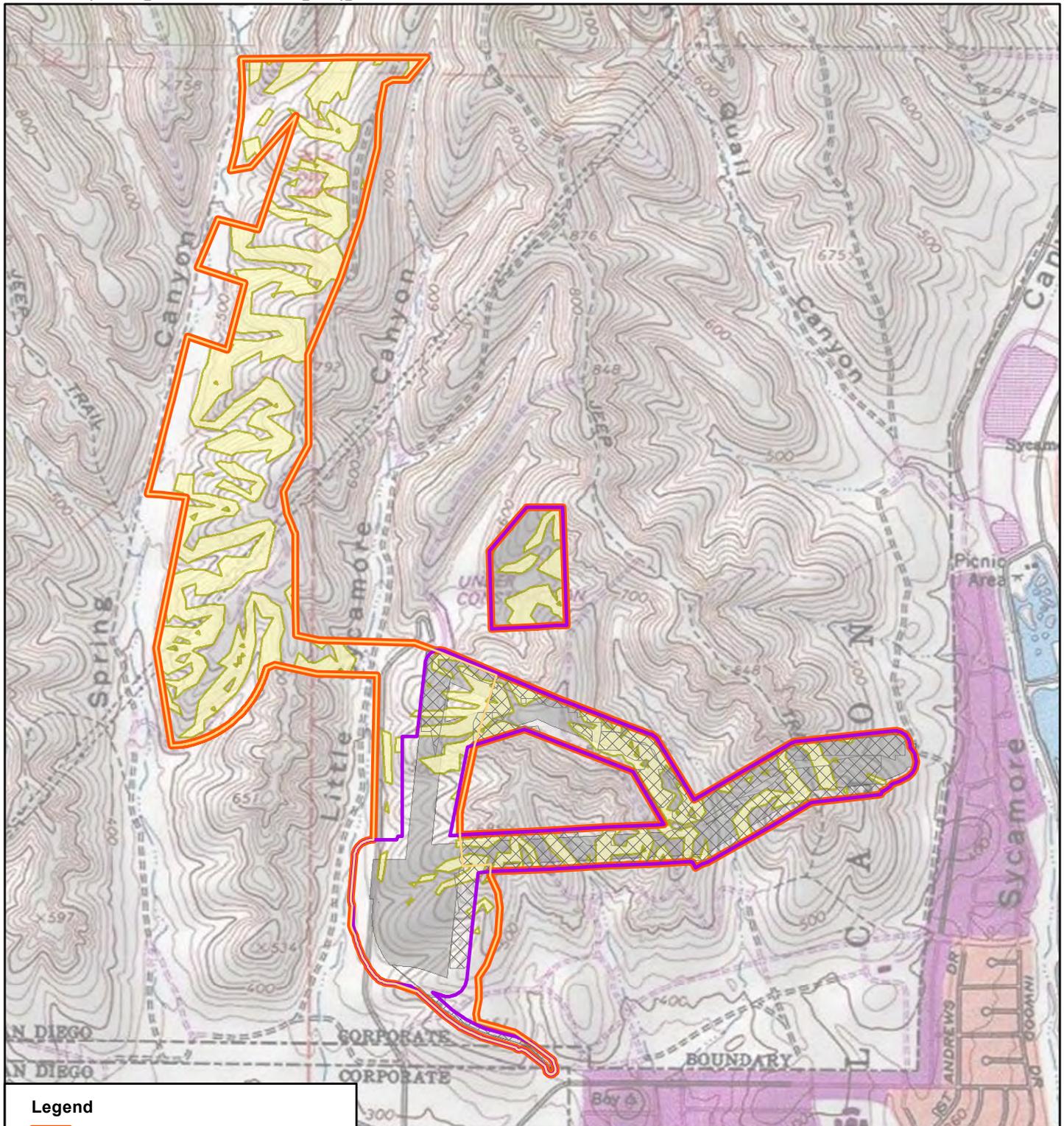


QUAIL BRUSH GENERATION PROJECT

FIGURE 2B
POTENTIAL MITIGATION SITES

0 250 500 1,000
 Feet

Tt TETRA TECH EC, INC.



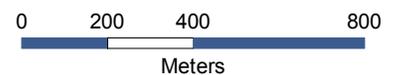
Legend

- Overall Survey Area
- May 2011 Survey Area
- Supplemental Study Area
- APE
- Slope \geq 35%
- Inaccessible Portions of the Supplemental Survey Area



QUAIL BRUSH GENERATION PROJECT

FIGURE 3
QUAIL BRUSH SURVEY AREAS



ATTACHMENT A
FUEL GAS HEATER CALCULATIONS

Table F.1-4 Fuel Gas Heater (revised 2-15-12)
Calculation of Criteria Pollutant Emissions for Process Heaters Firing Gaseous Fuels

Heater Operation Mode: Normal firing mode
 Ops Hr/Day: 24 Worst Case
 Ops Hr/Yr: 4232

of Units: 1
 Fuel Type: Nat Gas

Calculation of Criteria Pollutant Emissions from Each Identical Unit

Compound	Emission Factor, lbs/MMscf (1)	Maximum Hourly Emissions, lb/hr (2)	Maximum Daily Emissions, lb/day	Maximum Annual Emissions, lbs/yr	Annual Emissions, ton/yr (3)	All Units			
						Maximum Hourly Emissions, lb/hr	Maximum Daily Emissions, lb/day	Maximum Annual Emissions, lbs/yr	Annual Emissions, ton/yr
NOx	2.46E+01	9.66E-02	2.32E+00	4.09E+02	2.04E-01	9.66E-02	2.32E+00	4.09E+02	2.04E-01
CO	3.90E+01	1.53E-01	3.67E+00	6.47E+02	3.24E-01	1.53E-01	3.67E+00	6.47E+02	3.24E-01
VOC	5.50E+00	2.16E-02	5.18E-01	9.14E+01	4.57E-02	2.16E-02	5.18E-01	9.14E+01	4.57E-02
SOx	6.00E-01	2.36E-03	5.65E-02	9.97E+00	4.98E-03	2.36E-03	5.65E-02	9.97E+00	4.98E-03
PM10	7.60E+00	2.98E-02	7.16E-01	1.26E+02	6.31E-02	2.98E-02	7.16E-01	1.26E+02	6.31E-02
PM2.5	7.60E+00	2.98E-02	7.16E-01	1.26E+02	6.31E-02	2.98E-02	7.16E-01	1.26E+02	6.31E-02
NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	lbs/MMBtu								
CO2	1.17E+02	4.68E+02	1.12E+04	1.98E+06	9.90E+02	4.68E+02	1.12E+04	1.98E+06	9.90E+02
Methane	1.30E-02	5.20E-02	1.25E+00	2.20E+02	1.10E-01	5.20E-02	1.25E+00	2.20E+02	1.10E-01
N2O	2.21E-04	8.82E-04	2.12E-02	3.73E+00	1.87E-03	8.82E-04	2.12E-02	3.73E+00	1.87E-03
CO2e									9.93E+02
									metric tons 902.5

Notes:

- (1) natural gas criteria pollutant EF factors
- (2) Based on maximum hourly heater fuel use of and fuel HHV of 1019
- (3) Based on maximum annual heater fuel use of and fuel HHV of 1019
- (4) PM2.5 = PM10

Btu/scf gives 4 MMBtu/hr/boiler
 0.0039 MMscf/hr/boiler.
 16,928 MMBtu/yr/boiler
 Btu/scf gives 16.6124 MMscf/yr/boiler.

Refs:

- (1) EFs from ETI (mfg) and AP-42, Section 1.4, 7-98.
- (2) GHG Factors, General Protocol, CCAR, Ver 3.1, Jan 2009.
- (3) Mfg values adjusted for LNB application.

Exh Flow 3479.00 lbs/hr
 Exh Flow 2243.00 acfm
 Exh Temp 1015.00 deg F
 Exh Vel 12.42 ft/sec
 Stk Ht * ft.
 Stk Diam * in.

This unit is exempt from the SDAPCD permitting requirements per Rule 11.
This unit is exempt from the SDAPCD BACT requirements per Rule 20.2.
 Unit operates during main engine operation plus 200hours/yr for contingency.

* See modeling Appendix F.2 for final data.

ATTACHMENT B
WARM START HEATER CALCULATIONS

Table F.1-6 Warm Start Heater(s) (revised 2-15-12)
Calculation of Criteria Pollutant Emissions for Process Heaters Firing Gaseous Fuels

Heater Operation Mode: Normal firing mode
 Ops Hr/Day: 24 Worst Case
 Ops Hr/Yr: 4928

of Units: 1 *
 Fuel Type: Nat Gas

Calculation of Criteria Pollutant Emissions from Each Identical Unit

Compound	Emission Factor, lbs/MMscf (1)	Maximum Hourly Emissions, lb/hr (2)	Maximum Daily Emissions, lb/day	Maximum Annual Emissions, lbs/yr	Annual Emissions, ton/yr (3)	All Units			
						Maximum Hourly Emissions, lb/hr	Maximum Daily Emissions, lb/day	Maximum Annual Emissions, lbs/yr	Annual Emissions, ton/yr
NOx	2.46E+01	9.66E-02	2.32E+00	4.76E+02	2.38E-01	9.66E-02	2.32E+00	4.76E+02	2.38E-01
CO	3.90E+01	1.53E-01	3.67E+00	7.54E+02	3.77E-01	1.53E-01	3.67E+00	7.54E+02	3.77E-01
VOC	5.50E+00	2.16E-02	5.18E-01	1.06E+02	5.32E-02	2.16E-02	5.18E-01	1.06E+02	5.32E-02
SOx	6.00E-01	2.36E-03	5.65E-02	1.16E+01	5.80E-03	2.36E-03	5.65E-02	1.16E+01	5.80E-03
PM10	7.60E+00	2.98E-02	7.16E-01	1.47E+02	7.35E-02	2.98E-02	7.16E-01	1.47E+02	7.35E-02
PM2.5	7.60E+00	2.98E-02	7.16E-01	1.47E+02	7.35E-02	2.98E-02	7.16E-01	1.47E+02	7.35E-02
NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	lbs/MMbtu								
CO2	1.17E+02	4.68E+02	1.12E+04	2.31E+06	1.15E+03	4.68E+02	1.12E+04	2.31E+06	1.15E+03
Methane	1.30E-02	5.20E-02	1.25E+00	2.56E+02	1.28E-01	5.20E-02	1.25E+00	2.56E+02	1.28E-01
N2O	2.21E-04	8.82E-04	2.12E-02	4.35E+00	2.17E-03	8.82E-04	2.12E-02	4.35E+00	2.17E-03
CO2e									1.16E+03
									metric tons 1050.9

Notes:

- (1) natural gas criteria pollutant EF factors
- (2) Based on maximum hourly heater fuel use of and fuel HHV of 1019
- (3) Based on maximum annual heater fuel use of and fuel HHV of 1019
- (4) PM2.5 = PM10

4 MMBtu/hr/boiler
 Btu/scf gives 0.0039 MMscf/hr/boiler.
 19,712 MMBtu/yr/boiler
 Btu/scf gives 19.3445 MMscf/yr/boiler.

Refs:

- (1) EFs from ETI (mfg) and AP-42, Section 1.4, 7-98.
- (2) GHG Factors, General Protocol, CCAR, Ver 3.1, Jan 2009.
- (3) Mfg Nox values adjusted for LNB application.

Exh Flow 3479 lbs/hr
 Exh Flow 2243 acfm
 Exh Temp 1015 deg F
 Exh Vel 12.42 ft/sec
 Stl Ht * ft.
 Stk Diam * in.

These units are exempt from the SDAPCD permitting requirements per Rule 11.

These units are exempt from the SDAPCD BACT requirements per Rule 20.2.

* 2 units total, but one unit is strictly a standby/backup unit, and only used when the primary unit is down.

Total hours per year for both units combined will not exceed the above noted value.

Ops hours/year includes a 200 hour/year contingency.

ATTACHMENT C
REVISED CONSTRUCTION SUMMARY TABLES

Attachment to Air Quality Data Response #18.

Revised Tables F.5-1 and F.5-2.

Table F.5-1 Fugitive Dust Emissions Estimates	PM10	PM2.5
Fugitive Dust Source	Lbs/day	Lbs/day
Main Construction Site/Linears Phase I	5.85	1.23
Main Construction Site/Linears Phase 2	.78	.16
Main Construction Site Unpaved Roads	6.63	.66
Main Construction Site Paved Roads	.07	.01
Main Construction Site Trackout	.255	.043
Off Site Paved Roads	3.37	.57
Max Total Onsite Fugitive Dust Emissions-Phase I	12.55	1.9
Max Total Onsite Fugitive Dust Emissions-Phase II	7.48	0.83
<i>Max Total Offsite Fugitive Dust Emissions</i>	3.63	.61
Fugitive Dust Source	Tons/Period	Tons/Period
Main Construction Site/Linears Phase I	.1144	.024
Main Construction Site/Linears Phase 2	.1315	.0276
Main Construction Site Unpaved Roads	.43	.04
Main Construction Site Paved Roads	.01	.0017
Main Construction Site Trackout	.05	.008
Off Site Paved Roads	.70	.12
<i>Max Total Onsite Fugitive Dust Emissions</i>	.69	.093
<i>Max Total Offsite Fugitive Dust Emissions</i>	.75	.128
Fugitive Dust Source	Normalized Tons/Year	Normalized Tons/Year
<i>Max Total Onsite Fugitive Dust Emissions</i>	.52	.07
<i>Max Total Offsite Fugitive Dust Emissions</i>	.56	.096

Table F.5-2 Construction Exhaust Emissions Estimates						
Exhaust Sources, lbs/day	NOx	CO	VOC	SOx	PM10	PM2.5
Main Construction Site/Linears Phase I	174.4	75.6	22.6	.2	9.43	9.34
Main Construction Site/Linears Phase 2	151.2	127.9	25.3	.2	11	10.9
Construction Delivery	39.06	13.2	2.94	.048	1.78	1.76
Construction Worker Travel	3.33	33.24	2.76	.03	.27	.27
Max Total Onsite Exhaust Emissions-Phase I	174.4	75.6	22.6	.2	9.43	9.34
Max Total Onsite Exhaust Emissions-Phase II	151.2	127.9	25.3	.2	11	10.9
<i>Max Total Offsite Exhaust Emissions</i>	44.2	46.4	5.7	.08	2.1	2.0
Exhaust Sources, Tons/Period	NOx	CO	VOC	SOx	PM10	PM2.5
Main Construction Site/Linears Phase I	3.8	1.7	.5	.004	.21	.21
Main Construction Site/Linears Phase 2	28.5	24.1	4.8	.037	2.07	2.06
Construction Delivery	8.3	2.8	.62	.01	.38	.37
Construction Worker Travel	.70	7.0	.581	.006	.057	.057
<i>Max Total Onsite Exhaust Emissions</i>	32.3	25.8	5.3	.041	2.28	2.27
<i>Max Total Offsite Exhaust Emissions</i>	9	9.8	1.2	.016	.44	.43
Exhaust Sources, Normalized Tons/Yr	NOx	CO	VOC	SOx	PM10	PM2.5
<i>Max Total Onsite Exhaust Emissions</i>	24.2	19.35	3.98	.031	1.71	1.7
<i>Max Total Offsite Exhaust Emissions</i>	6.68	7.2	.9	.012	.32	.32

Onsite PM emissions for modeling:

Total Phase I PM10 (fugitives + exhaust) = 21.98 lbs/day
 Total Phase I PM2.5 (fugitives + exhaust) = 11.24 lbs/day
 Total Phase II PM10 (fugitives + exhaust) = 18.48 lbs/day
 Total Phase II PM2.5 (fugitives + exhaust) = 11.73 lbs/day

ATTACHMENT D
SYCAMORE LANDFILL PERMIT HISTORY

Table 1-1
Prior Permits Granted And Other Governmental
Actions Associated With Sycamore Landfill

<ul style="list-style-type: none"> • In 1963, the City of San Diego granted a Conditional Use Permit (CUP No. 6066) to the County of San Diego to operate Sycamore Landfill on approximately 113 acres. Other applicable solid waste facility permits were obtained subsequently by the County of San Diego for the landfill operation.
<ul style="list-style-type: none"> • The 1971 Elliott Community Plan, prepared by the City of San Diego, recognized the landfill use, and designated the site for solid waste disposal use.
<ul style="list-style-type: none"> • In November 1973, the San Diego County Environmental Review Board approved an EIR (SS6401) to expand the landfill by 380 acres.
<ul style="list-style-type: none"> • In May 1974, the City of San Diego Planning Commission approved an amendment of CUP No. 6066 to expand landfill uses from 113 to approximately 493 acres. This expansion was analyzed in a County EIR(SS6401).
<ul style="list-style-type: none"> • In September 1976, the City of San Diego Planning Commission granted a CUP Amendment (CUP 6066/ Amend. 2) to the County of San Diego to construct and operate a poultry waste composting operation at the Sycamore Landfill.
<ul style="list-style-type: none"> • In September 1976, the San Diego Regional Water Quality Board (SDRWQCB) issued Waste Discharge Requirement No. 76-40 for the landfill.
<ul style="list-style-type: none"> • In February 1980, the San Diego Regional Water Quality Board issued Addendum No. 1 to the Waste Water Discharge Requirement No. 74-60 for the landfill.
<ul style="list-style-type: none"> • In October 1980, the County Environmental Review Board recommended approval of Negative Declaration 80-0T-16 for private enterprise lease of a community recycling center north of Mast Boulevard.
<ul style="list-style-type: none"> • In December 1981, the City of San Diego issued Conditional Use Permit 10-640-0 allowing establishment of a recycling buy-back center at the entrance to Sycamore Landfill.
<ul style="list-style-type: none"> • In August 1984, the Planning Commission approved CUP No. 83-0789 to allow generation of electrical power from methane gases collected from the landfill. MND No. 83-0789 was prepared to address the proposed action.
<ul style="list-style-type: none"> • In April 1985, a draft EIR was prepared for the Sycamore Gravel Recovery Project, but no EIR number was listed on the title page or in the document. The State Clearinghouse has no record of the EIR, except for the Notice of Preparation.

Table 1-1
Permits Granted And Other Governmental Actions Associated With Sycamore Landfill
 (continued)

<ul style="list-style-type: none"> • In May 1986, the County confirmed the City of San Diego Planning Department's evaluation that no amendment to the CUP would be necessary for the proposed increased capacity and subsequent extension of the life of the landfill brought about by the relocation of existing transmission lines.
<ul style="list-style-type: none"> • In May 1989 San Diego County Air Pollution Control District (APCD) issued Permit to Operate #870383 allowing operation of electrical power generation equipment using landfill gas.
<ul style="list-style-type: none"> • On November 20, 1990, the County certified a Final EIR (FEIR) for Sycamore Landfill Modification and Power Line Relocation, SCH No. 90010305. Although the project was not implemented at that time, the FEIR concluded that there would be no significant impacts of the project from land use, projected traffic or noise, archaeology, energy or public health and safety. The ultimate landfill height was approved to elevations above 900 feet AMSL, depths of fill were increased to 434 feet and total landfill capacity was authorized to 80 million cubic yards.
<ul style="list-style-type: none"> • On May 21, 1991, the County Board of Supervisors certified Final EIR 88-14-63, which addressed a proposed new entrance facility for Sycamore Landfill. That new entrance was required to accommodate Caltrans' planned construction of SR-52. No significant traffic or other environmental impacts were identified in the EIR.
<ul style="list-style-type: none"> • In 1992, the County of San Diego submitted a Report of Disposal Site Information (RDSI) that included an Interim Staged Development Plan. The document also included a traffic report (Appendix K) that projected 620 waste vehicles per day in 1997, and found no significant traffic impact from that volume of traffic.
<ul style="list-style-type: none"> • On June 17, 1993, the San Diego Regional Water Quality Board issued order No. 93-86, amending the Waste Discharge Requirements for Sycamore Landfill (and all landfills in the region) in compliance with State Water Board Resolution No. 93-62.
<ul style="list-style-type: none"> • On August 19, 1993, the County of San Diego Department of Environmental Health, the Local Enforcement Agency (LEA), issued a Solid Waste Facility Permit (SWFP) allowing 620 waste vehicle loads per day to enter Sycamore Landfill, and to dispose of 2,500 tons of solid waste per day. Maximum landfill height was set at 883 feet AMSL, within a disposal area of 340 acres, and a site of 520 acres. The California Integrated Waste Management Board (CIWMB) concurred with the proposed permit on June 20, 1993.
<ul style="list-style-type: none"> • In 1995, the County issued Habitat Loss Permit (HLP) 95-008 for removal of 10.6 acres of grassland/coastal sage scrub habitat as part of the approved landfill operation, with a subsequent HLP 96-005 issued in 1996.
<ul style="list-style-type: none"> • In April 1996, the County prepared a subsequent EIR for the Sycamore Landfill Transmission Line Relocation, SCH No. 90010305. This EIR was later rescinded by the County in response to litigation.
<ul style="list-style-type: none"> • In 1997, the San Diego City Council amended the East Elliott Community Plan and the CUP to increase the landfill site designation to 493 acres.

Table 1-1
Permits Granted And Other Governmental Actions Associated With Sycamore Landfill
 (continued)

<ul style="list-style-type: none"> • In March 1997, the City of San Diego entered into an agreement with the U.S. Fish & Wildlife Service to establish a Multi-Habitat Planning Area (MHPA) in the vicinity of the landfill site as part of implementation of the Multiple Species Conservation Program (MSCP) in San Diego County. The landfill site itself was excluded from the MHPA, although the MHPA is adjacent to the landfill property boundaries on all sides.
<ul style="list-style-type: none"> • In October 1997, the County sold Sycamore Landfill to Allied Waste Industries.
<ul style="list-style-type: none"> • In November 1997, interim responsibilities for Sycamore Landfill was transferred by the CIWMB from the County of San Diego LEA to the City of San Diego LEA. Full certification of the role was completed in August 1999.
<ul style="list-style-type: none"> • On November 10, 1997, the San Diego Regional Water Quality Control Board accepted a notice of intent from the landfill to be covered by the General Permit for Stormwater Discharge Associated with Industrial Activities CA0000001 issued by the state Water Resources Control Board.
<ul style="list-style-type: none"> • In June 1998 San Diego County Air Pollution Control District (APCD) issued Permit to Operate #971111 allowing continued operation of the landfill and various ancillary facilities/activities, including a landfill gas flare system.
<ul style="list-style-type: none"> • In 1999, the City of San Diego approved opening of the landfill gates at 6:00 a.m., but retained the start of landfilling as 7:00 a.m.
<ul style="list-style-type: none"> • In April 1999, the City of San Diego Local Enforcement Agency (LEA) issued Negative Declaration 99021093 regarding increasing the maximum tonnage of MSW received at Sycamore Landfill to 3,300 tpd while retaining the 2,500 tpd average.
<ul style="list-style-type: none"> • In June 1999, the City of San Diego approved a Franchise Agreement with San Diego Landfill Systems (Allied Waste Industries). The agreement defines the rights and obligations of both parties regarding Sycamore Landfill, including annual tonnage limits as set forth in Appendix D of the Agreement.
<ul style="list-style-type: none"> • On August 2, 1999, the City of San Diego Local Enforcement Agency (LEA) issued a revised Solid Waste Facility Permit No. 37-AA-0023 for landfill operation. The permit allowed an increase in daily tonnage to 3,300 tbd for Sycamore Landfill based on a reduction in the permitted number of operation days per month, while retaining the 2,500 tpd average set in 1993. This decision was based on ND 99-0071.
<ul style="list-style-type: none"> • On September 30, 1999, the County of San Diego Department of Environmental Health issued Hazardous Waste Generator Permit to Operate No. H38122 to Sycamore Landfill.
<ul style="list-style-type: none"> • On October 13, 1999, the San Diego Regional Water Quality Control Board issued revised Waste Discharge Requirements (WDRs) No. 99-74.

Table 1-1
Permits Granted And Other Governmental Actions Associated With Sycamore Landfill
 (continued)

<ul style="list-style-type: none"> • On December 31, 1999, the County of San Diego Department of Agriculture registered the landfill's scales.
<ul style="list-style-type: none"> • On January 3, 2000, the U.S. Fish & Wildlife Service issued depredation permit MB 807538-0 to allow taking of up to 20 Western Gulls per year if other methods are not effective.
<ul style="list-style-type: none"> • In 2000, the City of San Diego implemented a new Land Development Code, which includes no "zone" for Class III MSW landfills such as Sycamore Landfill.
<ul style="list-style-type: none"> • On July 1, 2000, the San Diego Air Pollution Control District issued Permit to Operate No. 971111 for the landfill including quarrying, waste disposal, waste compaction and cover, and haul road operation.
<ul style="list-style-type: none"> • In October 2000, Sycamore Landfill submitted an updated RDSI to the LEA for approval.
<ul style="list-style-type: none"> • In July 2002, the City of San Diego approved Mitigated Negative Declaration (MND) 40-0765; a Community Plan Amendment; Planned Development Permit (PDP)/Site Development Permit (SDP) No. 40-0765; and a Multi-Habitat Planning Area (MHPA) boundary adjustment to brush and clear existing sensitive biological resources in three phases; process aggregate on site; and begin landfilling operations at 6:00 a.m.
<ul style="list-style-type: none"> • In July 2002, San Diego County APCD issued Permit to Operate #971226 requiring that certain procedural measures be followed to maintain compliance with applicable requirements of Title 5 of the 1990 Federal Clean Air Act Amendment.
<ul style="list-style-type: none"> • On October 23, 2002, the California Department of Fish and Game (CDFG) issued Streambed Alteration Agreement (SAA) No. R5-2002-0174 for proposed alterations of streambeds on-site associated with PDP/SDP 40-0765.
<ul style="list-style-type: none"> • On December 19, 2002, Sycamore Landfill submitted its Community Plan Initiation to the City of San Diego for the Master Plan Development Project.
<ul style="list-style-type: none"> • On February 3, 2003, CDFG issued Amendment 1 to SAA No. R5-2002-0174, revising required mitigation acreage to be consistent with PDP/SDP 40-0765.
<ul style="list-style-type: none"> • On February 6, 2003, Sycamore Landfill submitted as its application for the Community Plan Amendment and the Planned Development Permit to the City of San Diego for the Master Plan Development Project.
<ul style="list-style-type: none"> • On October 7, 2003, the San Diego Air Pollution Control District issued Permit to Operate 971111 for the landfill and its quarrying, waste disposal, waste compaction and cover, haul road operation, landfill gas monitoring and collection, and a landfill gas flare system.
<ul style="list-style-type: none"> • On November 21, 2003, the City of San Diego found that allowing aggregate processing trucks to enter and leave the property during the same hours as solid waste vehicles was in substantial conformance with PDP/SDP No. 40-0765.

Table 1-1
Permits Granted And Other Governmental Actions Associated With Sycamore Landfill
(continued)

<ul style="list-style-type: none">• In March of 2004, Sycamore Landfill submitted a revision of the October 2000 RDSI to the LEA for approval along with a revised Preliminary Closure/Post Closure Plan.
<ul style="list-style-type: none">• On October 19, 2004, the City of San Diego Local Enforcement Agency (LEA) issued a revised Solid Waste Facility Permit No. 37-AA-0023 for Sycamore Landfill operation.
<ul style="list-style-type: none">• On June 8, 2005, the San Diego Regional Water Quality Control Board issued Addendum No. 1 to Order No. 99-74 for Sycamore Landfill. According to the transmittal letter, the addendum requires electronic copies of submittals to the Board, allows acceptance of treated wood for disposal, but requires that such materials be disposed in portions of the landfill with a liner and a leachate collection and removal system.
<ul style="list-style-type: none">• On September 15, 2006, the City of San Diego LEA issued a revised Solid Waste Facility Permit No. 37-AA-0023 for landfill operation. The permit allowed an increase of daily tonnage to 3,965 tons per day, with no change to the daily number of waste haul vehicles allowed. In addition, the disposal capacity remaining under the permitted plan was adjusted to 48 million cubic yards. This decision was based on a Negative Declaration, No. SCH2006061091. The daily tonnage limits in the SWFP are still subject to the more restrictive annual limits in the Franchise Agreement.

ATTACHMENT E
CITY OF SAN DIEGO INITIATION APPLICATION



TETRA TECH EC, INC.

January 25, 2012

City of San Diego, Development Services
1222 First Avenue
San Diego, CA 92101-4154

Subject: Project Number 262668: Initiation Letter for Community Plan Amendment

City of San Diego Planning Commission and/or City Council:

This letter serves as an initiation letter for a Community Plan Amendment, Project Number 242668 Quail Brush Generation Project (Project). According to the Quail Brush Preliminary Review Assessment Letter from the City of San Diego (City) dated August 3, 2011, a Community Plan Amendment would be required for approval of the Project.

Project Overview

The proposed Project will be a nominal 100-megawatt intermediate/peaking load facility operating up to 3,800 hours per year using natural gas-fired reciprocating engine technology. The attached Figure 2.1-1 is a site location map and Figure 2.1-2 is a Project location map. Additional and more detailed Project information is stated in the Application for Certification (AFC) docketed at the California Energy Commission on August 29, 2011 and the Supplement to the AFC docketed at the California Energy Commission on October 24, 2011.

Community Plan Amendment

As shown in the attached Figure 4.2-2, the proposed Project site is designated as Open Space according to the City East Elliott Community Plan map. Land uses of greater intensity are not permitted in the open space designations and; therefore, the proposed Project currently conflicts with the East Elliott Community Plan and a Community Plan Amendment is proposed. A Community Plan Amendment would remove the Project site and associated facilities from Open Space designations. It is anticipated that once the necessary plan amendment, zone change, and boundary adjustment are completed, the Project would not contribute to a significant impact to land use in the project vicinity. Therefore, the Project would not result in a significant cumulative land use impact. Additionally, the Project will not interfere with the Sycamore Landfill to the north and residential properties in the surrounding community to the southeast. Implementation of the proposed Project will not increase land use impacts or development pressure on surrounding lands or increase the incremental impact of past, present, and/or reasonably foreseeable probable future projects.

It is proposed to amend the existing Open Space (OS) designation to Industrial Employment (IE) designation, which allows power generating facilities within this designation. Additionally, under the City's General Plan, the nearby Sycamore Landfill is designated as IE. Therefore, the proposed Community Plan Amendment will be compatible with adjacent land uses.

The General Plan Land Use Section, Criteria for Initiation of Amendments, Policy LU-D.10 states the following for the criteria for Initiation of Amendments:

Require that the Planning Department present and make a recommendation of approval or denial to the Planning Commission based upon compliance with all of the three initiation criteria as follows: a) the amendment request appears to be consistent with the goals and policies of the General Plan and community plan and any community plan specific amendment criteria; b) the proposed amendment provides additional public benefit to the community as compared to the existing land use designation, density/intensity range, plan policy or site design; and c) public facilities appear to be available to serve the proposed increase in density/intensity, or their provision will be addressed as a component of the amendment process.

The following contains responses to the Criteria for Initiation of Amendments:

a) The amendment request appears to be consistent with the goals and policies of the General Plan and community plan and any community plan specific amendment criteria.

A Community Plan amendment would remove the plant site, and possibly associated facilities from Open Space designations. Therefore, the Open Space guidelines listed in the East Elliott Community Plan would not apply to the proposed plan. A Community Plan Amendment would remove the plant site, and associated facilities from the Park, Open Space, and Recreation designations.

b) The proposed amendment provides additional public benefit to the community as compared to the existing land use designation, density/intensity range, plan policy or site design.

The Project is being developed to help serve San Diego Gas and Electric's (SDG&E's) future peak power demand and transmission system reliability needs. The facility's high efficiency and quick start capabilities will also help SDG&E meet customer demand when intermittent renewable generating resources are not available. In a press release issued by SDG&E on May 23, 2011, it was indicated that the proposed Project along with other new peaking resources will "help SDG&E to reduce its greenhouse gas (GHG) emissions and to contribute toward the state's overall GHG reduction goal". The proposed Project would benefit state of California reach its overall GHG reduction goal. Because the Project is a "peaking power" source it will support renewable power production, and will also offset peaking power produced by older, higher polluting facilities.

Project Construction

Project construction is expected to employ an average of 124 workers a month for the 18-month construction period. Monthly construction employment would peak at a maximum of 268 workers in month 11 of the proposed schedule. Very few, if any, of the workers employed during the construction phase of the Project (26 workers at most) would be expected to permanently relocate to the area as a result of this Project. The impact of Project construction on regional population levels is, therefore, expected to be minimal. Construction of the Project is not expected to displace existing population or physically divide an existing community.

Construction of the Project would have positive impacts on the local economy. Benefits associated with construction would be temporary impacts that would last for the duration of the construction phase of the Project, approximately 18 months. The total construction payroll, including both craft and staff employees, would be approximately \$8.7 million spread over the 18-month construction period. Local expenditures for construction materials and supplies are expected to total \$3 million during the construction phase of the Project. In addition to the jobs directly related to construction of the Project, construction of the Project would also support an estimated 77 (21 indirect and 56 induced) jobs per year for the duration of the construction period.

Annual construction-related indirect and induced income impacts would be approximately \$1.0 million and \$1.9 million, respectively. Construction of the Project would also generate approximately \$5.5 million in indirect (\$1.8 million) and induced (\$3.7 million) output (sales). Assuming a San Diego County tax rate of 8.75 percent, the Project would generate approximately \$282,500 in sales tax (in 2011 dollars) over the life of the construction phase of the Project.

Operation of the Project

Operation of the Project would have positive impacts on the local economy through the creation of local employment opportunities and through local expenditures for supplies and services. When completed, the Project is expected to employ 11 full-time operations employees in San Diego County, with an annual payroll of approximately \$1.35 million, which would include all salaries, overtime, benefits, and incentives, as well as payments to short-term contract employees. In addition, an annual operations and maintenance budget of about \$1 million would be spent locally (within San Diego County) on goods and supplies.

Construction and operation of the Project is not expected to result in significant adverse environmental and human health impacts to minority or low income communities within six miles of the Project site.

c) Public facilities appear to be available to serve the proposed increase in density/intensity, or their provision will be addressed as a component of the amendment process.

The site for the Project was specifically chosen because of its close proximity to existing high voltage transmission lines and natural gas lines situated within the Project site. One of the objectives for the proposed Project is to use a site location within SDG&E's service territory that has infrastructure with available capacity and ability to reliably support Project electric transmission, fuel supply and water needs with minimal impact on existing infrastructure systems or required new construction.

Public Services and Facilities

Law Enforcement

The proposed Project falls under the jurisdiction of the San Diego Police Department, Tierrasanta neighborhood, Eastern Division (San Diego Police Department Website 2011). The Eastern Division, located at 9225 Aero Drive, serves the neighborhoods of Allied Gardens, Birdland, Del Cerro, Grantville, Kearny Mesa, Lake Murray, Mission Valley East, San Carlos,

Serra Mesa, and Tierrasanta. Eastern Division serves a population of 123,503 people and encompasses 44.2 square miles.

The California Highway Patrol (CHP) is the primary law enforcement agency for State highways and roads. Services include law enforcement, traffic control, accident investigation, and the management of hazardous material spills. The closest CHP office is located in El Cajon at 1722 East Main Street, approximately 8.5 miles from the Project site.

Fire Protection

The City of San Diego Fire Department fire station #39 serves the proposed Project (San Diego Fire-Rescue Department Website 2011). Fire Station #39 was placed in service in June 1976 and serves the Tierrasanta neighborhood and surrounding area. The station is located at 4949 La Cuenta Drive and has a fire fighter/medic staff of 39. During fiscal year 2010, the station recorded 1,332 incident runs (84 for fire, 1,039 for medical/rescue, and 209 other). The average response time during the same period was 5:49 minutes. The total budget for the station was \$191 million in 2010 and is \$182 million in 2011.

Emergency Response

The San Diego Fire-Rescue Department Hazardous Materials Incident Response Team (HIRT) is responsible for responding to any incidents involving hazardous materials (HazMat) such as chemical explosions and spills for all of San Diego County (San Diego HazMat Website 2011).

San Diego City HIRT members also respond to other cities in the County and some military installations and Indian land. The HIRT was formed in 1993 and is a San Diego City and County effort with the San Diego Fire-Rescue Department and San Diego County Department of Environmental Health employees staffing HIRT. For such incidents, HIRT responds as a five person team.

There are 55 members of the San Diego Fire-Rescue Department trained and assigned to the Hazardous Materials Incident Response Team. HazMat units and personnel respond to incidents 24 hours a day 365 days a year throughout the City of San Diego and are available for Countywide emergencies. HazMat apparatus and crews are stationed at Station 44 (10011 Black Mountain Road), approximately 13 miles from the Project site.

The City of San Diego's HazMat team primarily responds to toxic chemical spills that require the team's specialized training and equipment. The team utilizes a HazMat Apparatus which serves as a mobile laboratory for analyzing materials onsite. In addition to dealing with typical emergency challenges, HazMat members intervene in chemical, biological and radiological accidents. All HazMat units are equipped with state-of-the-art protective clothing and chemical detection devices. HazMat teams do not clean up hazardous materials. Their primary duties are to rescue people at HazMat incidents and stabilize chemical emergencies.

Hospitals

The nearest hospital to the proposed Project is the Stephen Birch Healthcare Center at Sharp Memorial Hospital, located approximately 10 miles by road travel at 7901 Frost Street, San Diego, CA 92123. The hospital is home to San Diego's largest, most modern Emergency and Trauma Center. It is a designated 24-hour trauma center for San Diego County. The hospital

has 368 beds and would be well equipped to treat most injuries that might occur at the Project site.

Utilities

Electrical and Gas

The Project will consist of an onsite 138kV facility switchyard including switchgear and the main voltage step-up transformer, switchgear, circuit breakers and disconnects. The proposed 138kV gen tie route will be approximately 7,800 feet of 138kV single-circuit gen tie, adjacent to the existing SDG&E 138kV transmission line, between the Project and the existing SDG&E 138kV Carlton Hills Substation (Figure 2.1-2).

The 138kV gen tie will run parallel to the existing SDG&E 138kV transmission line and will utilize the existing access road with spurs to the new tower locations for construction and maintenance purposes. The 138kV gen tie would be arrayed in a single-circuit configuration, supported by steel structures. The overhead line conductor type that is proposed for the 138kV Transmission System is a 477 thousand circular mil (kcmil) Aluminum Conductor, Steel Supported (ACSS) Cable (Hawk).

Power for construction and operations at the plant site will be provided by SDG&E via the local distribution line that runs along Sycamore Landfill Road adjacent to the site. The distribution line will be tapped at the nearest existing pole and run onto the plant site where a temporary service transformer will be installed. The distribution line will be installed on standard wooden poles.

The Project will connect to the existing 20-inch diameter SDG&E natural gas pipeline that is located 2,200 feet away from the proposed plant site at the intersection of Mast Boulevard and Sycamore Landfill Road. From the tie-in point, the Project's natural gas pipeline lateral will generally follow Sycamore Landfill Road to the proposed plant site.

Water and Wastewater

Construction water during the 18-month construction process will be supplied from the City of San Diego Municipal Water Department under a temporary water use permit via a nearby fire hydrant adjacent to Mission Gorge Road, south of the intersection with West Hills Parkway. The water will be trucked from the hydrant to the construction areas where dust suppression is required. If this location becomes unavailable, another suitable hydrant will be selected. Construction water use will be greatest during the first three months, when site grading is scheduled. Peak water use of 58,000 gallons per day (gpd) during construction is based on 40 gallons of water per cubic yard of fill and 125,000 to 150,000 total cubic yards of grading over three months. For remaining construction water uses, approximately 8,000 gpd will be required to build the gas line, plant site, gen tie, and switchyard.

The Project will use very little water since engine cooling is accomplished with a closed loop system. Since there will be no requirement for purified water, a demineralizing system will not be required. Site water usage will be primarily for fire protection, personal consumption, sanitary purposes, landscape irrigation, and wash-down cleaning. As a result, site consumption will average approximately 1.0 gallon per minute (gpm) during periods of plant operation. These water requirements will be served through one 600,000-gallon fire water tank and one

10,000-gallon domestic water storage tank. Water for Project operations will be provided by Palomar Mountain Premium Springs, with the most likely water source located near Palomar Mountain, California, approximately 68 miles from the Project site.

Sanitary wastewater will be discharged to an onsite septic system. Process wastewater or service water that has the potential for contamination will be discharged to a wastewater holding tank. In the unlikely event of an accidental release or spillage of wastewater, the contents of the holding tank will be conveyed offsite by a licensed contractor for treatment and disposal.

Waste

There are five Class III waste disposal sites in the vicinity of the Project, each of which is capable of accepting the non-hazardous solid waste that will be generated during project construction and operations. These landfills include: Sycamore Landfill, Ramona Landfill, Otay Landfill, Clean Harbors, Inc., and Chemical Waste, with Sycamore Landfill being the most likely disposal site. Although a specific landfill or landfills have not yet been identified for the Project, area landfill capacities are expected to be more than capable of handling the waste disposal requirements of the Project. Specific Project construction wastes (types and quantities) are listed in the Application for Certification (AFC) for the Project. Nonhazardous and Hazardous wastes generated during Project operations are also described in the AFC.

Thank you for your review of this Letter of Initiation. Should you have any questions about the Project, please contact me at connie.farmer@tetrattech.com or via phone at (303) 980-3653.

Sincerely,



Connie Farmer
Senior Project Manager

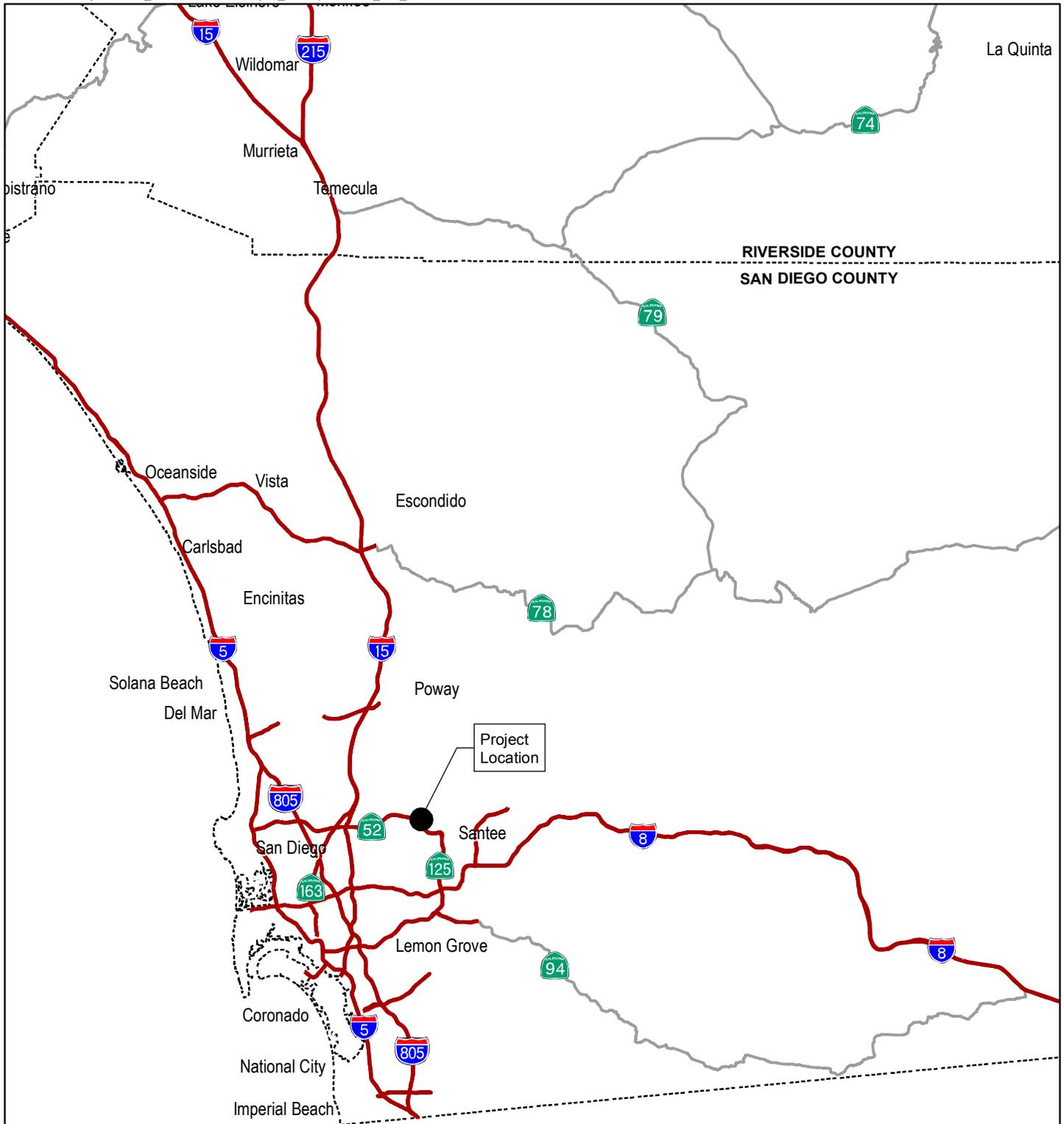
Attachments

Figure 2.1-1, Site Location
Figure 2.1-2, Project Layout
Figure 4.2-2, General Plan Land Use Designations

References

San Diego Fire-Rescue Department website 2011. accessed 7/4/11.
<http://www.sandiego.gov/fireandems/>
San Diego HazMat website 2011. accessed 7/5/11.
<http://www.sandiego.gov/fireandems/about/hazmat.shtml>.
San Diego Police Department Website 2011. accessed 7/4/11. <http://www.sandiego.gov/police/>

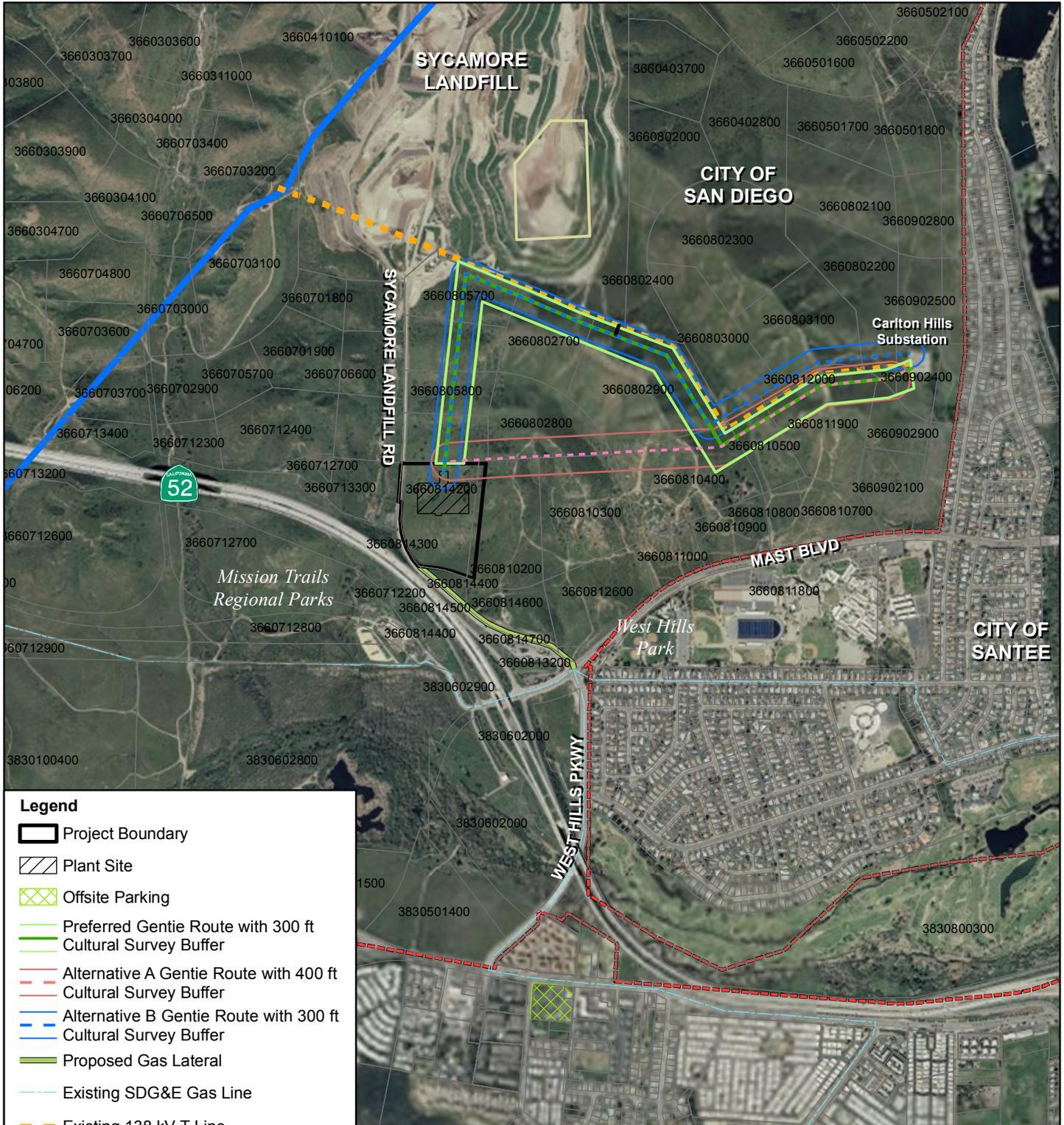
FIGURES



QUAIL BRUSH GENERATION PROJECT

FIGURE 2.1-1
SITE LOCATION MAP





Legend

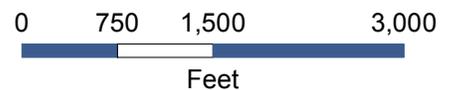
-  Project Boundary
-  Plant Site
-  Offsite Parking
-  Preferred Gentie Route with 300 ft Cultural Survey Buffer
-  Alternative A Gentie Route with 400 ft Cultural Survey Buffer
-  Alternative B Gentie Route with 300 ft Cultural Survey Buffer
-  Proposed Gas Lateral
-  Existing SDG&E Gas Line
-  Existing 138 kV T-Line
-  Existing SDG&E 230 kV T-Lines (2)
-  Proposed Construction Laydown Area (5 acres within this 20 acre area)
-  City Boundary
-  Assessor's Parcel Number

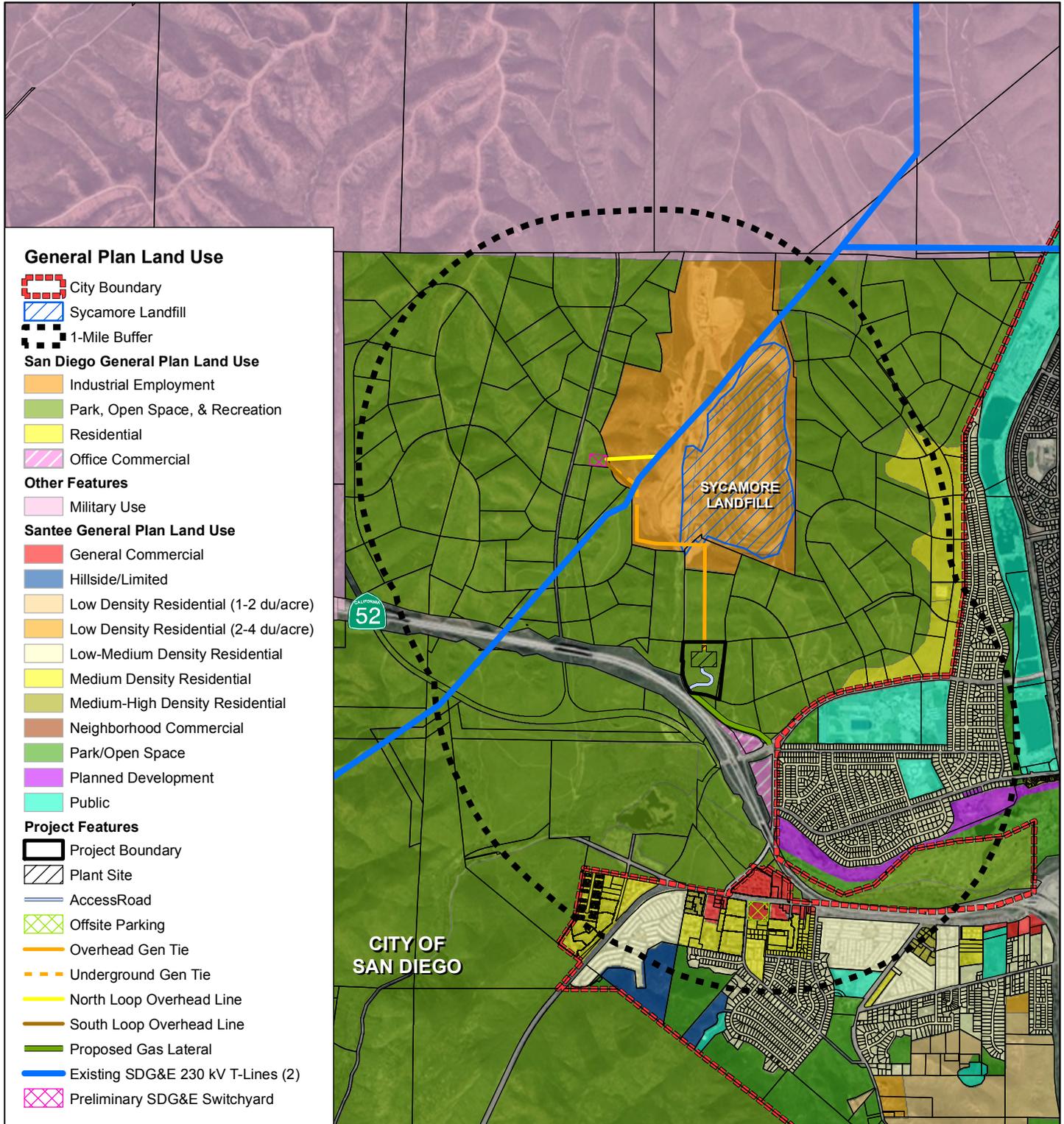
As the Project is not within a sectioned part of the county, section, township, and range information cannot be provided.



QUAIL BRUSH GENERATION PROJECT

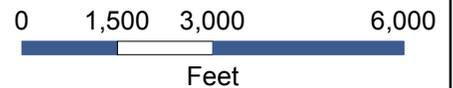
**FIGURE 2.1-2
PROJECT LAYOUT**





QUAIL BRUSH GENERATION PROJECT

**FIGURE 4.2-2
 GENERAL PLAN LAND USE
 DESIGNATIONS**





City of San Diego
 Development Services
 1222 First Ave., MS-302
 San Diego, CA 92101
 (619) 446-5000

THE CITY OF SAN DIEGO

General Application

FORM
DS-3032
 JANUARY 2011

Part I (Must be completed for all permits/approvals)

1. Approval Type: Check appropriate box for type of approval needed. Separate electrical, plumbing and/or mechanical permits are required for projects other than single-family residences or duplexes
 Electrical, Plumbing/Mechanical Sign Structure
 Grading Public Right-of-Way; Subdivision Demolition/Removal Development Approval Vesting Tentative Map
 Tentative Map Map Waiver Other: Community Plan Amendment

2. Project Address/Location: Include Building or Suite No. **Project Title:** **Project No.:** For City Use Only
 Sycamore Landfill Road; approx. 0.6 miles north of Mast Rd Quail Brush Generation Project

Legal Description: (Lot, Block, Subdivision Name & Map Number) **Assessor's Parcel Number:**
 Lot 4 of the re-subdivision of a part of Fanita Rancho; City/County of San Diego Map 1703 APN 366-081-42

Existing Use: Undeveloped **Proposed Use:** Gas fired, reciprocating engine electric generating station; 11 engines

Project Description:
 Construction and operation of an electric generation station for peaking power purposes. Generators are Wartsila Model 20V34SG natural gas fired engines (11 at 9.3 MW gross) with state-of-the-art pollution control equipment. Near SDG&E system

3. Property Owner/Lessee Tenant Name: Check one Owner Lessee or Tenant Telephone: Fax:
 Sycamore Landfill

Address: City: State: Zip Code: E-mail Address:
 8514 Mast Boulevard Santee CA 92071

4. Permit Holder Name - This is the property owner, person, or entity that is granted authority by the property owner to be responsible for scheduling inspections, receiving notices of failed inspections, permit expirations or revocation hearings, and who has the right to cancel the approval (in addition to the property owner). SDMC Section 113.0103.

Name: Telephone: Fax:
 C. Richard Neff (704) 672-2818 (704) 525-9934

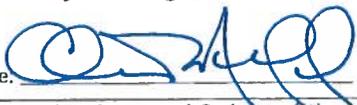
Address: City: State: Zip Code: E-mail Address:
 9405 Arrowpoint Boulevard Charlotte NC 28273 RickNeff@Cogentrix.com

5. Licensed Design Professional (if required): (check one) Architect Engineer License No.: Fax:
 Name: Telephone: Fax:
 Tetra Tech

Address: City: State: Zip Code: E-mail Address:
 17885 Von Karman Avenue Irvine CA 92614

6. Historical Resources/Lead Hazard Prevention and Control -
 a. Year constructed for all structures on project site: _____
 b. HRB Site # and/or historic district if property is designated or in a historic district (if none write N/A): n/a
 c. Does the project include any permanent or temporary alterations or impacts to the exterior (cutting-patching-access-repair, roof repair or replacement, windows added-removed-repaired-replaced, etc) Yes No
 d. Does the project include any foundation repair, digging, trenching or other site work Yes No

I certify that the information above is correct and accurate to the best of my knowledge. I understand that the project will be distributed/reviewed based on the information provided.

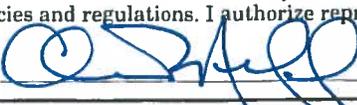
Print Name: C. Richard Neff Signature:  Date: 25-Jan-2012

7. Notice of Violation - If you have received a Notice of Violation, Civil Penalty Notice and Order, or Stipulated Judgment, a copy must be provided at the time of project submittal. Is there an active code enforcement violation case on this site? No Yes, copy attached

8. Applicant Name: Check one Property Owner Authorized Agent of Property Owner Other Person per M.C. Section 112.0102 Telephone: Fax:
 C. Richard Neff, Quail Brush Genco, LLC (704) 672-2818 (704) 525-9934

Address: City: State: Zip Code: E-mail Address:
 9405 Arrowpoint Boulevard Charlotte NC 28273 RickNeff@Cogentrix.com

Applicant's Signature: I certify that I have read this application and state that the above information is correct, and that I am the property owner, authorized agent of the property owner, or other person having a legal right, interest, or entitlement to the use of the property that is the subject of this application (Municipal Code Section 112.0102). I understand that the applicant is responsible for knowing and complying with the governing policies and regulations applicable to the proposed development or permit. The City is not liable for any damages or loss resulting from the actual or alleged failure to inform the applicant of any applicable laws or regulations, including before or during final inspections. City approval of a permit application, including all related plans and documents, is not a grant of approval to violate any applicable policy or regulation, nor does it constitute a waiver by the City to pursue any remedy, which may be available to enforce and correct violations of the applicable policies and regulations. I authorize representatives of the city to enter the above-identified property for inspection purposes.

Signature:  Date: 25-Jan-2012

Project Address/Location: Include Building or Suite No.

Project No. For City Use Only

Sycamore Landfill Road; approx. 0.6 miles north of Mast Rd

9. Contractor Name:

Telephone:

Fax:

TBD

Address:

City:

State:

Zip Code:

E-mail Address:

State License No.:

License Class:

City Business Tax No.: (required per SDMC Section 31.0301)

* Licensed Contractor's Declaration: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Print Name: TBD

Date:

Contractor Signature or authorized agent:

10. * Workers' Compensation Declaration: I hereby affirm under penalty of perjury one of the following declarations:

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:

- a. I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.
b. I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Insurance Carrier: Policy No.: Expiration Date:

Name of Agent: Phone No.:

- c. I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Print Name:

Date:

Contractor, owner, or authorized agent signature:

11. * Owner-Builder Declaration: I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s). (Section 7031.5, Business and Professions Code: Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).):

- a. I, as owner of the property, or my employees with wages as their sole compensation, will do all or portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the Owner-Builder will have the burden of proving that it was not built or improved for the purpose of sale).
b. I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and contracts for such projects with contractor(s) licensed pursuant to the Contractor's License Law).
c. I am exempt from licensure under the Contractors' State License Law for the following reason:

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following web site: http://www.leginfo.ca.gov/calaw.html.

Print Name:

Date:

Owner Signature or authorized agent:

A separate Owner-Builder Verification form (DS-3042) must also be signed by the owner.

12. Construction Lending Agency: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name: TBD

Lender's Address: TBD

* Required per California State Law, Health & Safety Code Section 19825-29

Part II (Must be completed for all Construction Permits, except Grading and Public Right-of-way)



TETRA TECH EC, INC.

January 26, 2012

Lanny R Post
C/O Rosa Garcia

City of San Diego, DSD
1222 First Avenue, MS 302
San Diego, CA 92101

Subject: Community Plan Amendment – Check and Deposit Form

Dear Ms. Garcia:

Lanny Post requested that we send you the enclosed check for \$8,000 and Deposit Form for Project # 270282/242668. The check is for the initial deposit for a community plan amendment (CPA). Please process the CPA.

If you have any question please do not hesitate to call me at (949) 809-5016.

Sincerely,

Nancy Hsu
Senior Environmental Planner



Invoice

1/25/12 11:20 a

THE CITY OF SAN DIEGO
Development Services

Page 1 of

1222 First Avenue, San Diego, CA 92101-4154

L64A-007

Invoice Number: 420227



Status: Invoiced

Issued: 01/25/2012 11:20 am Post, Lanny

Voided:

Customer: Hsu, Nancy

Development: 158457 Devel Num 158457

Project: 270282 Quail Brush Generation Project PM: Post, Lanny (619)446-5105



Project Fees:

<u>Fee Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Fee Amount</u>
Deposit Account	8,000.00	Dollars	\$8,000.00
Approval Total:			\$8,000.00
Job Total:			\$8,000.00
Project Total:			\$8,000.00
Invoice Total:			\$8,000.00



City of San Diego
 Development Services
 Attn: Deposit Accounts
 1222 First Ave., MS-302
 San Diego, CA 92101
 (619) 446-5000

Deposit Account / Financially Responsible Party

FORM
 DS-3242

APRIL 2010

Project Address/Location: Sycamore Landfill Road; Approx 0.6 miles north of Mast Rd	Project No.: <i>For City Use Only</i>	Internal Order #: <i>For City Use Only</i>
----------------------------------------------------------------------------------------	---------------------------------------	--------------------------------------------

Approval Type: Check appropriate box for type of approval needed:

Grading
 Public Right-of-Way
 Subdivision
 Neighborhood Use
 Coastal
 Neighborhood Development
 Site Development
 Planned Development
 Conditional Use
 Variance
 Vesting Tentative Map
 Tentative Map
 Map Waiver
 Other: Community Plan Amendment

Deposit Trust Fund Account Information: The plan review of development approvals/engineering permits require a deposit into a Trust Fund account. A Trust Fund account is established with an initial deposit. This initial deposit is drawn against to pay for the review of your project. During project review, the Financially Responsible Party will receive a monthly deposit statement reflecting the charges made against the account. The Financially Responsible Party may receive invoices for additional deposits for subsequent reviews of the project in order to maintain a minimum balance. The payment of this invoice will be required in order to continue processing your project. At the end of the project, any remaining funds will be returned to the Financially Responsible Party.

FINANCIALLY RESPONSIBLE PARTY

Name/Firm Name: Quail Brush Genco, LLC	Address: 9405 Arrowpoint Boulevard	E-mail: RickNeff@Cogentrix.com
City: Charlotte	State: NC	Zip Code: 28273
	Telephone: (704) 672-2818	Fax No.: (704) 525-9934

Financially Responsible Party Declaration: I understand that City expenses may exceed the estimated advance deposit and, when requested by the City of San Diego, will provide additional funds to maintain a positive balance. Further, the sale or other disposition of the property does not relieve the individual or Company/Corporation of their obligation to maintain a positive balance in the trust account, unless the City of San Diego approves a Change of Responsible Party and transfer of funds. Should the account go into deficit, all City work may stop until the requested advance deposit is received.

This is a continuation of existing project: 242668 or 270282 Please use the existing deposit account: _____

Instructions for using existing deposit account: Financially Responsible Party completing this form must be the same. Existing account must be in "open" status. Ministerial and Discretionary projects can not be combined into one account. Project location must be the same. Examples: public improvement/grading can be combined with a final map and a multi discipline preliminary review can be combined with a discretionary project. Accounting for multiple projects using the same account will not be possible.

Print Name: C. Richard Neff Title: Vice President
 Signature*:  Date: January 26, 2012

***The name of the individual and the person who signs this declaration must be the same. If a corporation is listed, a corporate officer must sign the declaration (President, Vice-President, Chairman, Secretary or Treasurer)**

FOR CITY USE ONLY

Project Title: _____

Date Requested: _____ Requested By: _____

Staff Member Assigned to Account: _____

ACCOUNT CLOSURE AUTHORIZATION

Date Requested: _____

Print Name: _____

Signature: _____

Completed
 Inactive
 Withdrawn
 Collections



Cogentrix

QUAIL BRUSH GENCO LLC
9405 ARROWPOINT BOULEVARD
CHARLOTTE, NC 28273-8110

WELLS FARGO BANK, N.A.
Charlotte, NC

045029

66-21/530

Date 01/24/2012

Pay Amount \$8,000.00***

Pay ****EIGHT THOUSAND AND XX / 100 DOLLAR****

To The Order Of CITY OF SAN DIEGO
CITY OF SAN DIEGO DEVELOPMENT SERVICES
1222 FIRST AVENUE MS 301
SAN DIEGO, CA 92101

Authorized Signature

⑈045029⑈ ⑆053000219⑆ 2000060318578⑈

Check Date: 01/24/2012		Vendor Number: 0000015965			Check No. 045029	
Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Taken	Late Charge	Paid Amount
1222FIRJAN12	Jan/20/2012	00000033	8,000.00	0.00	0.00	8,000.00
Check Number	Date	Total Gross Amount	Total Discounts	Total Late Charges	Total Paid Amount	
045029	Jan/24/2012	\$8,000.00	\$0.00	\$0.00	\$8,000.00	

Check Date: 01/24/2012

Vendor Number: 0000015965

Check No. 045029

Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Taken	Late Charge	Paid Amount
1222FIRJAN12	Jan/20/2012	00000033	8,000.00	0.00	0.00	8,000.00

Check Number

Date

Total
Gross Amount

Total
Discounts

Total
Late Charges

Total
Paid Amount

045029

Jan/24/2012

\$8,000.00

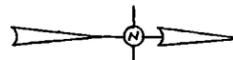
\$0.00

\$0.00

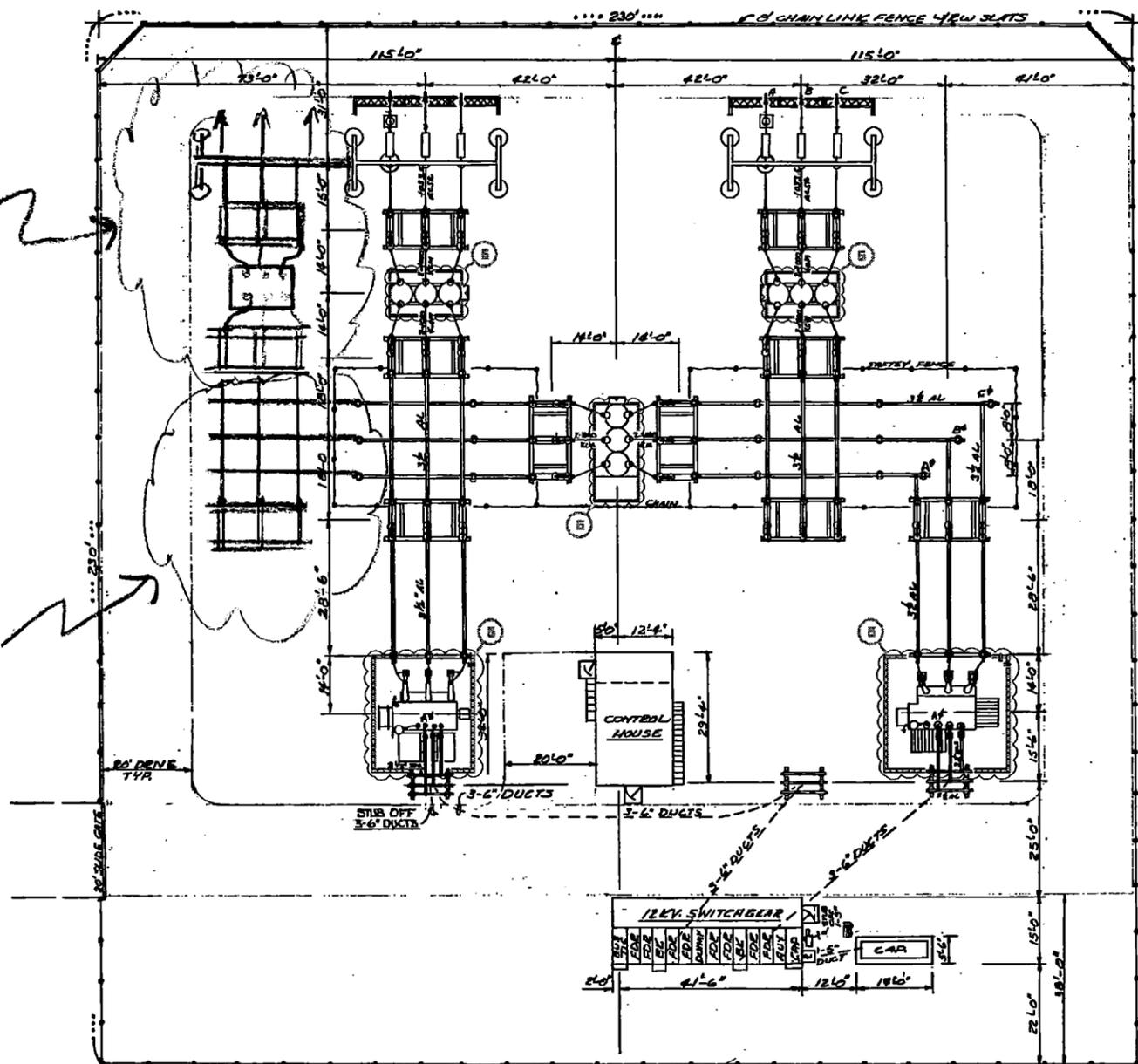
\$8,000.00

ATTACHMENT F
QUAIL BRUSH 138 KV FACILITY SWITCHYARD LAYOUT

ATTACHMENT G
CARLTON HILLS 138 KV SUBSTATION PLAN



IF 2
 RNU



FOR DRIVEWAY SURFACING, SEE STD. DNG. CE-9 TYPE B

Quail Brush



REVISIONS

NO.	WORK DONE	DATE	BY	APP'D	NO.	WORK DONE	DATE	BY	APP'D	NO.	WORK DONE	DATE	BY	APP'D	NO.
1															
2															
3															
4															
5															
6															



SAN DIEGO GAS & ELECTRIC COMPANY
CARLTON HILLS 120/12KV SUBSTATION
 GENERAL ARRANGEMENT

BRNAN BY J.L. GAN DATE 11/19/75 PLOT 1/16"=1' NO. 5984124 REV. 6
 CHECKED BY GP DATE 11/19/75
 APPROVED BY GSP DATE 11/19/75
 CAD NO. CH5581 PLOT NO. 1 = 192