CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5112
www.energy.ca.gov

# NOTICE OF DETERMINATION

**PETITION TO MODIFY THE GENERAL PLANT ARRANGEMENT FOR THE MARIPOSA ENERGY PROJECT (09-AFC-4C)**

| DOCKET |
|---|
| 09-AFC-4C |
| DATE SEP 19 2011 |
| RECD. SEP 19 2011 |

A petition has been filed with the California Energy Commission by Mariposa Energy, LLC requesting to modify the Mariposa Energy Project. The 200-megawatt project was certified by the Energy Commission on May 18, 2011, and is currently under construction and is 10 percent complete. The facility is located in Alameda County.

## DESCRIPTION OF PROPOSED MODIFICATIONS

The applicant is proposing changes in the general plant arrangement for the Mariposa Energy Project (MEP). The applicant is not proposing or requesting any modifications to the Conditions of Certification. The size of the facility is not increasing and the location is the same.

During the final design phase of MEP, Mariposa Energy's engineering contractor determined that the general arrangement drawing included in the Application for Certification (AFC) (Figure 2.3-1) required minor revisions, including the slight shifting of the location of the water storage tanks near the firewater pump, and minor adjustments to the location, orientation, and configuration of certain other structures and equipment. The original site layout and proposed site layout is attached.

Mariposa Energy is proposing to move the water tanks, and relocate several buildings and ancillary equipment, there are no proposed changes to the location of the combustion turbine exhaust or the firewater pump exhaust stacks identified in the Final Decision. The following is a list of the minor revisions to the locations of the buildings and equipment compared to the general arrangement equipment layout used during the licensing proceeding and the air dispersion modeling analysis used as the basis for the Commission Decision.

- The wastewater tank move approximately 22 feet southwest.
- The demineralized water tank move approximately 31 feet southwest.
- The raw water tank move approximately 11 feet southwest.
- The fuel gas compressor skids will move approximately 30 feet northwest.
- The Warehouse and Maintenance Building move approximately 50 feet southeast.
- The gas metering station move approximately 80 feet west.
- The 230-kilovolt (kV) circuit breakers, 230-kV disconnect switch, and the generator stepup transformers will each move approximately 20 to 120 feet southwest, respectively.
- Orientation of the power distribution center, auxiliary transformers, and station transformers are rotated 90 degrees counter clockwise.
- The single-unit chiller package will be replaced with a four-unit chiller package. The chiller package will move approximately 43 feet southwest. The original chiller module

arrangement depicted on the general arrangement was based on one of multiple potential manufacturers. Chiller module sizes and arrangements vary among potential suppliers, and the current arrangement was not known until final vendor selection was completed. During final bidding, the vendor retracted the design offer originally shown, and the four-unit chiller package shown is the final design selected for the project.

## ENERGY COMMISSION STAFF REVIEW AND DETERMINATION

Pursuant to section 1769(a)(2), Title 20, California Code of Regulations, "(w)here staff determines that there is no possibility that the modifications may have a significant effect on the environment, and if the modifications will not result in a change or deletion of a condition adopted by the commission in the final decision or make changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards, no commission approval is required…"

Energy Commission staff has determined that approval by the full Commission is not required and the proposed modifications meet the criteria for approval at the staff level because:

- The modification will not have any significant effect on the environment;
- Existing conditions of certification are sufficient to cover the proposed modification without changes to, or deletions of, any conditions of certification; and
- The project as modified will maintain full compliance with applicable LORS.

Specifically staff found:

Air Quality - The project's new general arrangement would not affect the building downwash parameters for any of the four combustion turbines but would affect the downwash characteristics of the fire pump engine. Based on the results of the BPIP analysis and the updated AERMOD version analysis, it is concluded that the turbine commissioning impacts will not be affected by the proposed general arrangement revision. There are no proposed changes to the permitted turbine and fire pump stack locations. The project will comply with all applicable ambient air quality standards and will not result in any significant air quality impacts.

Biological Resources – the disturbance area of the power plant location has already been evaluated. No new impacts will be created, the power plant size and location is not changing.

Cultural Resources – the disturbance area of the power plant location has already been evaluated. No new impacts will be created, the power plant size and location is not changing.

Facility Design – the modification does not propose any additional facilities or features to what was anticipated. The general arrangement is altered. No new facilities are proposed.

Geology and Paleontology – the disturbance area of the power plant location has already been evaluated. No new impacts will be created, the power plant size and location is not changing.

Hazardous Materials – the proposal does not change the hazardous materials that will be used on-site. No modifications to the conditions or approvals are necessary.

Land Use – the disturbance area of the power plant location has already been evaluated. No new impacts will be created, the power plant size and location is not changing.

Noise and Vibration - The chiller package represents one of the noise sources associated with the licensed project. However, the noise from the project, as modified, will remain below all applicable noise standards and the selection of an alternate chiller package does not require a modification to the Conditions of Certification for noise. Therefore, the facility will continue to meet all existing environmental standards and there will be no significant adverse environmental impacts.

Socioeconomic - The proposed amendment would not increase or diminish the construction workforce. The proposed amendment would not significantly impact population/housing, public services and recreation and therefore, would not affect the technical area of Socioeconomics.

Soil and Water Resources – the disturbance area of the power plant location has already been evaluated. No new impacts will be created, the power plant size and location is not changing. No modification to drainage or water use is proposed.

Traffic and Transportation - With respect to traffic and transportation impacts, the proposed modifications would not affect the technical area. The modifications would not result in additional road disturbance or new crossings or access roads. Also, the project modifications would not result in increased construction or operations trips, so they would not affect traffic level of service. Exhaust stack plumes would be unaffected, and the already minimal plume produced by the original single-unit chiller package would not be increased by changing to a four-unit chiller package. Traffic and Transportation system impacts are expected to remain less than significant with implementation of the Conditions of Certification set forth in the May 2011 Commission Decision.

Transmission Line Safety – The project's connection into the transmission system is not changing and no new facilities are proposed.

Transmission System Engineering - The project's connection into the transmission system is not changing and no new facilities are proposed.

Visual Resources - The identified changes in the General Plant Arrangement do not require any changes or additions to any of the visual resource conditions of certification found in the Final Commission Decision, dated May 2011 for the Mariposa Energy Center or additional condition(s). Staff concludes that no change or deletion to the existing visual resources conditions of certification found in the Final Commission Decision is necessary, and with the

full and effective implementation of the conditions of the license, the identified new arrangement for the project would not create an adverse visual resource related effect.

Waste Management – the modification to the general arrangement will not create additional waste or require additional conditions of certification. The proposed modification is consistent with staff's analysis.

Worker Safety –the General Plant Arrangement will not require any changes or additions to any of the worker safety conditions of certification found in the Final Commission Decision, dated May 2011 for the Mariposa Energy Center or additional condition(s). No additional safety concerns are being created by the proposed modification.

Any person may file a written objection to staff's determination within 14 days of the date of this notice, **September 19, 2011**, on the grounds that the project modification does not meet the criteria set forth in Section 1769(a)(2). All objections must be in writing and must be sent either by U.S. mail, e-mail, or other document delivery service to **Craig Hoffman**, Compliance Project Manager, at the address shown below:

California Energy Commission
c/o Craig Hoffman
1516 9th Street, MS 2000
Sacramento, CA 95814

Comments may be submitted by fax to (916) 654-3882, or by e-mail at **choffman@energy.state.ca.us.** If no substantive objection is received in writing, the requested project modifications will be deemed approved.

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.state.ca.us. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

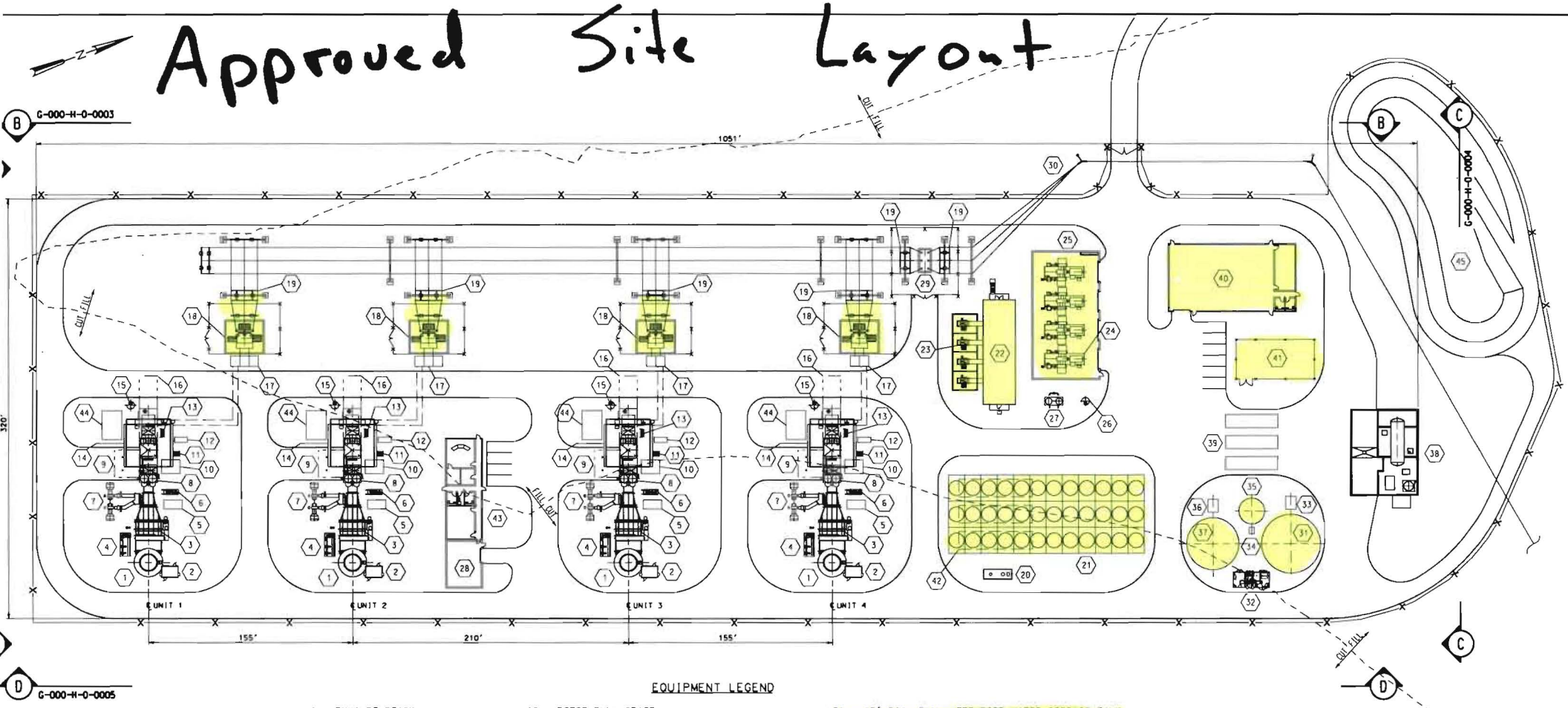
If you have questions about this notice, please contact **Craig Hoffman** at (916) **654-4781**, or by fax or e-mail using the above information.

Date: _____

_____
**CHRISTOPHER J. MARXEN**, Manager
Compliance Office
Siting, Transmission & Environmental Protection Division

**Mail List # 7358**

Approved Site Layout




EQUIPMENT LEGEND

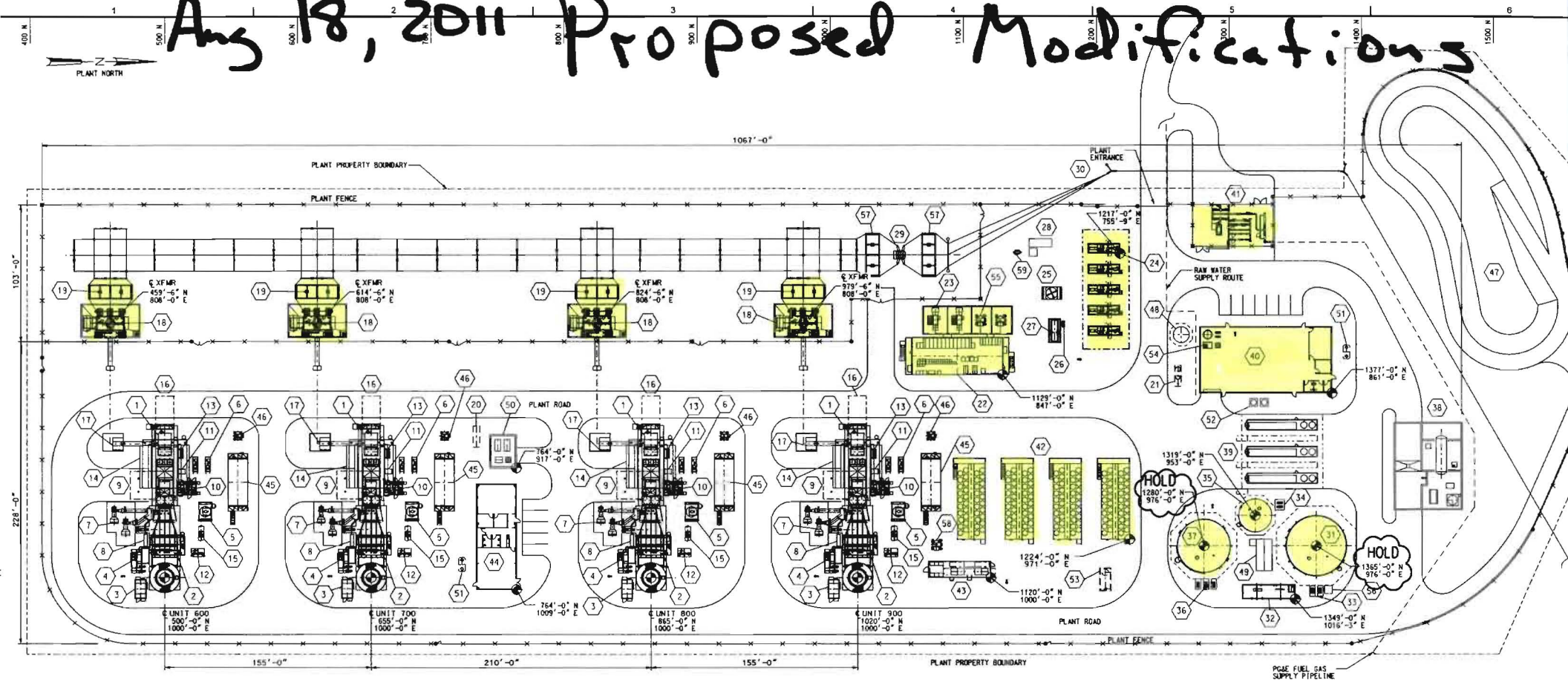
1. EXHAUST STACK
2. CEMS STATION
3. SCR/CO CATALYST
4. AMMONIA INJECTION SKID
5. LUBE OIL FIN FAN COOLER
6. WATER INJECTION SKID
7. TEMPERING AIR FANS
8. GAS TURBINE GENERATOR (CTG)
9. TURBINE REMOVAL AREA
10. AUXILIARY SKID
11. SPRINT SKID
12. FINAL GAS FUEL FILTER
13. CO2 BOTTLE STORAGE
14. CTG INLET AIR FILTER
15. WATER WASH DRAINS TANK
16. ROTOR PULL SPACE
17. SWGR. GENERATOR BREAKER (TYP OF 2 UNITS)
18. GENERATOR STEP-UP TRANSFORMER (GSU)
19. DISCONNECT
20. OIL/WATER SEPARATOR
21. CHILLER/AIR COOLED RADIATOR SYSTEM
22. POWER DISTRIBUTION CENTER (PDC)
23. AUX TRANSFORMERS
24. FUEL GAS COMPRESSORS
25. FUEL GAS COMPRESSOR ENCLOSURE
26. FUEL GAS WASTE SUMP
27. FUEL GAS COALESCING FILTERS
28. AIR COMPR/DRYER/RECEIVER ENCLOSURE
29. CIRCUIT BREAKER
30. OVERHEAD POWER LINES
31. 45' DIA. RAW WATER/FIRE WATER STORAGE TANK
32. FIRE PROTECTION WATER PUMPS
33. RAW WATER TRANSFER PUMPS
34. WASTE WATER TRANSFER PUMPS
35. 25' DIA. WASTE WATER STORAGE TANK
36. DEMIN WATER TRANSFER PUMPS
37. 40' DIA. DEMIN WATER STORAGE TANK
38. AQUEOUS AMMONIA UNLOADING/STORAGE AREA
39. DEMIN WATER TRAILERS
40. WAREHOUSE & MAINT. BUILDING
41. GAS METERING STATION
42. CHILLER SKIDS (3)
43. CONTROL/ADMIN. BUILDING
44. CTG ELECT. MODULE
45. RETENTION POND

NOTE:
FINISHED GRADE EL. 125'-6"
T.O. CONC. EL. 126'-0"

40 0 40 80
Scale: 1 INCH = 40 FEET

**FIGURE 2.3-1**
**GENERAL ARRANGE**
Mariposa Energy Project
*Alameda County, California*

# Aug 18, 2011 Proposed Modifications




| # | EQUIP. TAGS | DESCRIPTION |
|---|---|---|
| 1. | CTG-CTG-6/7/8/9-01 | GE LM-6000PC SPRINT COMBUSTION TURBINE GENERATOR |
| 2. | SCR-CTG-6/7/8/9-01 | HOT SCR (EOM) |
| 3. | PK-CEM-6/7/8/9-01 | CONTINUOUS EMISSIONS MONITORING SYSTEM |
| 4. | SK-AMM-6/7/8/9-01 | AMMONIA VAPORIZATION SKID |
| 5. | CLR-CTG-6/7/8/9-01 | CTG LUBE OIL COOLER |
| 6. | SK-CTG-6/7/8/9-02 A/B | CTG DW WATER INJECTION PUMP SKIDS |
| 7. | FAN-TA-6/7/8/9-01 A/B | TEMPERING AIR FANS |
| 8. | MCC-ELV-06/07/08/09-01 | MOTOR CONTROL CENTER |
| 9. | TURBINE REMOVAL AREA | |
| 10. | SK-CTG-6/7/8/9-01 | CTG AUXILIARY SKID |
| 11. | SK-CTG-6/7/8/9-03 | CTG SPRINT SKID |
| 12. | SK-CTG-6/7/8/9-04 | CTG FUEL GAS FINAL FILTER SKID |
| 13. | SK-CTG-6/7/8/9-05 | CTG FIRE PROTECTION SKID (CO2 BOTTLES) |
| 14. | CTG INLET AIR FILTER | CTG INLET AIR FILTER |
| 15. | TK-CTG-6/7/8/9-01 | CTG WATER WASH DRAIN TANK |
| 16. | GENERATOR REMOVAL AREA | |
| 17. | SG-EMV-6/7/8/9-01 | 15 KV BREAKER - UNITS 6 THRU 9 |
| 18. | GSU-6/7/8/9 | GENERATOR STEP-UP TRANSFORMER (GSU) |
| 19. | DS003.004.005.006 | 230 KV DISCONNECT SWITCH |

| # | EQUIP. TAGS | DESCRIPTION |
|---|---|---|
| 20. | S-OW-0-01 | OILY WATER SUMP |
| 21. | OWS-OOW-0-01 | OILY WATER SEPARATOR |
| 22. | POWER DISTRIBUTION CENTER (PDC) | |
| 23. | AUX-EMV-0-01 | AUX TRANSFORMERS |
| 24. | SK-FG-0-01/A/B/C/D/E | FUEL GAS COMPRESSOR SKIDS |
| 25. | FFC-FG-0-01 | FUEL GAS FIN-FAN RECYCLE COOLER |
| 26. | TK-FG-0-01 | FUEL GAS DRAINS TANK |
| 27. | SK-FG-0-02 | FUEL GAS DISCHARGE COALESCING FILTER SKID |
| 28. | HTR-FG-0-02 | FUEL GAS DEW POINT HEATER |
| 29. | CB230-01 | 230 KV CIRCUIT BREAKER |
| 30. | OVERHEAD 230 KV TRANSMISSION LINES | |
| 31. | TK-SW-0-01 | SERVICE/FIRE WATER STORAGE TANK (45' DIA.) |
| 32. | SK-FP-0-01 | FIRE WATER PUMP SKID |
| 33. | P-SW-0-01 A/B | SERVICE WATER PUMPS |
| 34. | P-WW-0-02 A/B | PROCESS WASTE WATER FORWARDING PUMPS |
| 35. | TK-WW-0-01 | WASTE WATER STORAGE TANK (25' DIA.) |
| 36. | P-DW-0-01 A/B/C | DEMIN WATER PUMPS |
| 37. | TK-DW-0-01 | DEMIN WATER STORAGE TANK (40' DIA.) |
| 38. | VS-AMM-0-01 | AQUEOUS AMMONIA STORAGE TANK |

| # | EQUIP. TAGS | DESCRIPTION |
|---|---|---|
| 39. | DEMIN WATER TRAILERS (PORTABLE) | |
| 40. | WAREHOUSE & MAINT. BUILDING | |
| 41. | SK-FG-0-03 | FUEL GAS LETDOWN STATION |
| 42. | SK-CHW-0-01/02/03/04 | CHILLER PACKAGE |
| 43. | HTR-CHW-0-01 | ANTI-ICING HEATER |
| 44. | CONTROL/ADMIN. BUILDING | |
| 45. | CTG POWER CONTROL MODULE | |
| 46. | XR-CTG-6/7/8/9-01 | PCM TRANSFORMER |
| 47. | DETENTION POND | |
| 48. | TK-PW-0-01 | 7500 GAL. UNTREATED POTABLE WATER STORAGE TANK |
| 49. | SK-DW-0-01 | MULTIMEDIA FILTER SKID |
| 50. | COMPRESSED AIR SYSTEM SHED | |
| 51. | TK-SWV-0-01/02 | SANITARY WASTE HOLDING TANKS (PUMP OUT) |
| 52. | CHEMICAL STORAGE TOTE | |
| 53. | S-WW-0-01 | PROCESS WASTE WATER SUMP |
| 54. | SK-PW-0-01 | POTABLE WATER SKID |
| 55. | SST-ELV-0-01 | STATION SERVICE TRANSFORMERS |
| 56. | SK-CF-0-01 | SODIUM HYPOCHLORITE SKID |
| 57. | DS001, DS002 | 230 KV PRIMARY DISCONNECT SWITCHES |
| 58. | XR-CHW-0-01 | ANTI-ICING SYSTEM TRANSFORMER |
| 59. | XR-FG-0-01 | FUEL GAS HEATER TRANSFORMER |

NOTES:

1. ALL COORDINATES SHOWN ARE PLANT GR
COORDINATES UNLESS NOTED OTHERWISE.
SEE CIVIL DRAWING NUMBERS:
C-N0001 & C-S0001 FOR ADDITIONAL INFOR

GE DATUM (B.O.S. LM6000) 0'-0" = EL. 1
GRADE EL. 125'-6"

40 0 40
Scale: 1 INCH = 40 FEET

| NO. | DATE | REVISION | BY | CHK |
|---|---|---|---|---|
| A | 03/24/11 | ISSUED FOR REVIEW | EFC | SR |
| B | 04/15/11 | ISSUED FOR REVIEW | EFC | TBJ |
| 0 | 06/01/11 | ISSUED FOR CONSTRUCTION | EFC | TBJ |

| REVISION APPROVAL | | REV 0 | DATE 06/01/11 |
|---|---|---|---|
| DISCIPLINE | REVIEWED | DISCIPLINE | REVIEWED |
| CIVIL | JP | ELECTRICAL | KM |
| STRUCTURAL | MI | INST & CONT. | MS |
| MECHANICAL | AJ | ARCH. | LB |
| PROCESS | AJ | GEN. ARRANG. | EC |
| PIPING | YS | | |

| STATUS | | | | | |
|---|---|---|---|---|---|
| ISSUED | REV | DATE | DM | SDE | PEM |
| PRELIMINARY | P1 | 01/14/11 | | | |
| FOR REVIEW AND APPROVAL | B | 04/15/11 | RP | RP | JN |
| APPROVED FOR CONSTRUCTION | 0 | 6/2/11 | | | |
| REVISED & APPROVED FOR CONSTRUCTION | | | | | |

SCALE 1" = 40'

Diamond Generating Corporation
A Subsidiary of Mitsubishi Corporation

Mariposa Energy Project

PROJECT NO. 415059

CH2MHILL
CH2MHILL Engineers, Inc.

GENERAL ARRANGEMENT

EQUIPMENT LOCATION

DWG. NO. G-PE001

RESPONSIBLE ENGINEER

PE #

ONE INCH ON ORIGINAL DRAWING. 1"

FILENAME: mapgpe001.dgn PLOT DATE: