APPLICATION FOR CERTIFICATION

FOR THE

PICO POWER PROJECT

SANTA CLARA, CALIFORNIA

VOLUME I: SECTIONS 1 THROUGH 10

Submitted to:

California Energy Commission
Sacramento, California

Submitted by:

Silicon Valley Power
City of Santa Clara

Santa Clara, California

October 2002

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ACRONYMS AND ABBREVIATIONS

AA	Administering Agency
ABAG	Association of Bay Area Governments
AC	Alternating current
ADT	Average Daily Traffic
AFC	Application for Certification
AGC	Automatic generation control
ALUC	Santa Clara County Airport Land Use Commission
ANSI	American National Standards Institute
APCD	Air Pollution Control District
APE	Area of Potential Effect
AQMD	Air Quality Management District
ASME	American Society of Mechanical Engineers
AST	Aboveground storage tank
ASTM	American Society for Testing and Materials
BA	Biological assessment
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BCDC	Bay Conservation and Development Commission
BO	Biological opinion
BOD	Biochemical oxygen demand
BP	Before present
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAC	California Administrative Code
CalARP	California's Accidental Release Prevention Program
CalTrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CATEF	California Air Toxics Emission Factor
CBC	California Building Code
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDOE	California Department of Education
CEC	California Energy Commission
CEDD	California Employment Development Department
CEM	Continuous emissions monitoring
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CHRIS	California Historical Resources Information System
CIP	Clean-In-Place
CIWMA	California Integrated Waste Management Act
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base

CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
COB	Chief Building Official
CPUC	California Public Utility Commission
CRGT	Chemically recuperated gas turbine
CRT	Cathode ray tube
CRWQCB	California Regional Water Quality Control Board
CSC	California species of concern
CTG	Combustion turbine-generator
CUPA	Certified Unified Program Agency
CURE	California Unions for Reliable Energy
CWA	Clean Water Act
DC	Direct current
DCIS	Distributed control and information system
DHS	Department of Health Services
DTSC	California Department of Toxic Substances Control
EMF	Electric and magnetic field
EPCRA	Emergency Planning and Community Right-to-know Act
ERC	Emission reduction credit
ESA	Endangered Species Act
ESA	Environmental Site Assessment
°F	Degrees Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
gpm	Gallons per minute
GWh	Gigawatt hours
H&SC	California Health & Safety Code
HAT	Humid air turbine
HCP	Habitat Conservation Plan
HHV	High heat value
HMBP	Hazardous materials business plan
HNO_3	Nitric acid
HOV	High Occupancy Vehicle
HP	High-pressure
HRSG	Heat recovery steam generator
HWCL	Hazardous Waste Control Law
Hz	Hertz
in. HgA	Inches of mercury, absolute
I/O	Input/output
IP	Intermediate-pressure
ISO	International Standards Organization
ISRGT	Intercooled steam recuperated gas turbine
KOP	Key Observation Point
kV	Kilovolt
kV/m	Kilovolts per meter
LAER	lowest achievable emission rate
LC	Load center
LEPC	Local emergency planning committee
LORS	Laws, ordinances, regulations, and standards

LOS	Level of Service
LP	Low-pressure
MCC	Motor control center
MEI	Maximally exposed individual
MF	Micro-filtration
MF/RO	Membrane filtration reverse osmosis
$\mu g/m^3$	Micrograms per cubic meter
mG	Milligauss
mgd	Million gallons per day
mmBtu	Million British thermal units
MRF	Material recovery facility
MSDS	Material Safety Data Sheets
MSL	Mean sea level
MW	Megawatt
MWh	Megawatt hours
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCPA	Northern California Power Agency
NEIH	National Institute of Environmental Health Sciences
NEPA	National Environmental Policy Act
NESC	National Electric Safety Code
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NH_3	Ammonia
NMFS	National Marine Fisheries Service
NOD	Notice of Deficiency
NOI	Notice of Intent
NO	Nitrogen oxide
NO_2	Nitrogen dioxide
NOx	Nitrogen oxides
NPCA	Notice of Proposed Construction or Alteration
NPDES	National Pollutant Discharge Elimination System
NPOC	Nonprecursor organic compounds
NRCS	Natural Resource Conservation Service
NSPS	New Source Performance Standard
NSR	New source review
O&M	Operation and Maintenance
OHP	Office of Historic Preservation
OSHA	Occupational Safety and Health Act
PCB	Polychlorinated biphenyl
PCN	Preconstruction Notification
PG&E	Pacific Gas & Electric Company
PM_{10}	Particular matter with a diameter less than 10 microns
$PM_{2.5}$	Particular matter with a diameter less than 2.5 microns
POC	Precursor organic compounds
POTW	Publicly owned treatment works
ppb	Parts per billion
pphm	Parts per hundred million
ppm	Parts per million
ppmvd	Parts per million by volume, dry basis
PPE	Personal Protective Equipment

PPP	Pico Power Project
PRC	Public resource code
PSD	Prevention of significant deterioration
PSIDM	Predicted seismic intensity distribution maps
psig	Pounds per square inch gauge
RCRA	Resource Conservation and Recovery Act
REL	Reference Exposure Level
RI-TVI	Radio Interference and Television Interference
RMP	Risk management plan
RO	Reverse osmosis
ROC	Reactive organic compound
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SBWR	South Bay Water Recycling
SC	Species of concern
SCR	Selective catalytic reduction
SCADA	Supervisory Control and Data Acquisition
SCUSD	Santa Clara Unified School District
SCVWD	Santa Clara Valley Water District
SEBP	South East Bay Plain
SERC	state emergency response committee
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	Sulfer dioxide
SO_x	Sulfer oxides
SOP	Standard operating procedure
SPCC	Spill prevention control and countermeasure
SPCRR	South Pacific Coast Railroad
STG	Steam turbine-generator
STIG	Steam injected gas turbine
SVP	Silicon Valley Power
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TDS	Total dissolved solids
TEWAC	Totally Enclosed Water/Air-Cooled
TPH	Total petroleum hydrocarbons
tpy	Tons per year
TQ	Threshold quantity
TSD	Treatment, Storage, and Disposal
TSP	Total suspended particulate
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UPCF	Unified Program Consolidated Form
UPRR	Union Pacific Railroad Company
UPS	Uninterruptible Power Supply
USACE	United States Army Corps of Engineers
USC	United State Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

USGS	United States Geological Survey
VOC	Volatile organic compound
VTA	Santa Clara Valley Transportation Authority
WMI	Santa Clara Basin Watershed Management Initiative
WPCF	Water Pollution Control Facility
WPCP	Water Pollution Control Plant