

**DRAFT**

**SERVICE AGREEMENT BETWEEN THE CITY OF SUNNYVALE  
AND PETERSON POWER SYSTEMS  
FOR ON-CALL MAINTENANCE AND REPAIR SERVICES**

THIS AGREEMENT dated \_\_\_\_\_ is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and PETERSON POWER SYSTEMS ("CONTRACTOR").

WHEREAS, CITY is in need of specialized services in relation to on-call repair and maintenance of equipment as required by the Environmental Services Department Water Pollution Control Plant; and

WHEREAS, CONTRACTOR possesses the skill and expertise to provide the required services;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS AGREEMENT.

1. Services by CONTRACTOR

CONTRACTOR shall determine the method, details and means of performing the services. CONTRACTOR shall possess a current California Contractor's License required work that is performed per Scope of Work (Attachment A). Contractor shall perform routine and scheduled repair and/or maintenance of specialized equipment in accordance with manufacturer's recommendations as well as perform non-routine service and/or repairs, as required in accordance with the attached Scope of Work.

2. Time for Performance

The term of this Agreement shall be from November 1, 2014, through October 31, 2017, unless otherwise terminated. Agreement may be renewed for up to two additional years at the option of CITY.

3. Duties of CITY

CITY shall supply any documents or information available to City required by CONTRACTOR for performance of its duties. Any materials provided shall be returned to CITY upon completion of the work.

4. Compensation

CITY agrees to pay CONTRACTOR as full compensation for the services rendered pursuant to this Agreement, the hourly rates set forth in Exhibit "A". Total compensation shall not exceed Two Million and no/100 Dollars (\$2,000,000.00). CONTRACTOR shall submit invoices to CITY no more frequently than monthly for services provided to date. Payment shall be made within thirty days upon receipt of an accurate itemized invoice by CITY's Accounts Payable unit.

5. Ownership of Documents

CITY shall have full and complete access to CONTRACTOR'S working papers, drawings and other documents during progress of the work. All documents of any description prepared by CONTRACTOR shall become the property of the CITY at the completion of the project and upon payment in full to the CONTRACTOR. CONTRACTOR may retain a copy of all materials produced pursuant to this Agreement.

6. Conflict of Interest

No officer or employee of CITY shall have any interest, direct or indirect, in this Agreement or in the proceeds thereof. During the term of this Agreement CONTRACTOR shall not accept employment or an obligation which is inconsistent or incompatible with CONTRACTOR'S obligations under this Agreement.

7. Confidential Information

CONTRACTOR shall maintain in confidence and at no time use, except to the extent required to perform its obligations hereunder, any and all proprietary or confidential information of CITY of which CONTRACTOR may become aware in the performance of its services.

8. Compliance with Laws

- (a) CONTRACTOR shall not discriminate against, or engage in the harassment of, any City employee or volunteer or any employee of CONTRACTOR or applicant for employment because of an individual's race, religion, color, sex, gender identity, sexual orientation (including heterosexuality, homosexuality and bisexuality), ethnic or national origin, ancestry, citizenship status, uniformed service member status, marital status, family relationship, pregnancy, age, cancer or HIV/AIDS-related medical condition, genetic characteristics, and physical or mental disability (whether perceived or actual). This prohibition shall apply to all of CONTRACTOR'S employment practices and to all of CONTRACTOR'S activities as a provider of services to the City.
- (b) CONTRACTOR shall comply with all federal, state and city laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Agreement.

9. Independent Contractor

CONTRACTOR is acting as an independent contractor in furnishing the services and performing the work required by this Agreement and is not an agent, servant or employee of CITY. Nothing in this Agreement shall be interpreted or construed as creating or establishing the relationship of employer and employee between CITY and CONTRACTOR. CONTRACTOR is responsible for paying all required state and federal taxes.

10. Indemnity

CONTRACTOR shall indemnify, defend, and hold harmless the CITY, its officers, officials, employees and volunteers from and against all claims, damages, losses and expenses, including attorney fees, arising out of the performance of the services described in Exhibit "A", caused in whole or in part by any negligent act or omission of AGENCY, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except where caused by the active negligence, sole negligence or willful misconduct of the CITY.

11. Insurance

CONTRACTOR shall take out and maintain during the life of this Agreement policies of insurance as specified in Exhibit "B" attached and incorporated by reference, and shall provide all certificates or endorsements as specified in Exhibit "B."

12. CITY Representative

Bhavani Yerrapotu, as the City Manager's authorized representative, shall represent CITY in all matters pertaining to the services to be rendered under this Agreement. All requirements of CITY pertaining to the services and materials to be rendered under this Agreement shall be coordinated through the CITY representative.

13. CONTRACTOR Representative

Eric Dallas Ledford shall represent CONTRACTOR in all matters pertaining to the services and materials to be rendered under this Agreement; all requirements of CONTRACTOR pertaining to the services or materials to be rendered under this Agreement shall be coordinated through the CONTRACTOR'S representative.

14. Notices

All notices required by this Agreement, other than invoices for payment which shall be sent directly to Accounts Payable, shall be in writing, and shall be personally delivered, sent by first class with postage prepaid, or sent by commercial courier, addressed as follows:

To CITY:                   Bhavani Yerrapotu  
                                  Environmental Services Department  
                                  Water Pollution Control Plant  
                                  CITY OF SUNNYVALE  
                                  P. O. Box 3707  
                                  Sunnyvale, CA 94088-3707

To CONTRACTOR: Eric Dallas Ledford  
                                  Peterson Power Systems  
                                  2828 Teagarden St.  
                                  San Leandro, CA 94577

Nothing in this provision shall be construed to prohibit communication by more expedient means, such as by telephone or facsimile transmission, to accomplish timely communication. However, to constitute effective notice, written confirmation of a telephone conversation or an original of a facsimile transmission must be sent by first class mail or commercial carrier, or hand delivered. Each party may change the address by written notice in accordance with this paragraph. Notices delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated as of two days after mailing, unless such date is a date on which there is no mail service. In that event communication is deemed to occur on the next mail service day.

15. Assignment

Neither party shall assign or sublet any portion of this Agreement without the prior written consent of the other party.

16. Termination

If CONTRACTOR defaults in the performance of this Agreement, or materially breaches any of its provisions, CITY at its option may terminate this Agreement by giving written notice to CONTRACTOR. If CITY fails to pay CONTRACTOR, CONTRACTOR at its option may terminate this Agreement if the failure is not remedied by CITY within thirty (30) days after written notification of failure to pay.

Without limitation to such rights or remedies as CITY shall otherwise have by law, CITY also shall have the right to terminate this Agreement for any reason upon ten (10) days' written notice to CONTRACTOR. In the event of such termination, CONTRACTOR shall be compensated in proportion to the percentage of services performed or materials furnished (in relation to the total which would have been performed or furnished) through the date of receipt of notification from CITY to terminate. CONTRACTOR shall present CITY with any work product completed at that point in time.

17. Entire Agreement; Amendment

This writing constitutes the entire agreement between the parties relating to the services to be performed or materials to be furnished hereunder. No modification of this Agreement shall be effective unless and until such modification is evidenced by writing signed by all parties.

18. Miscellaneous

Time shall be of the essence in this Agreement. Failure on the part of either party to enforce any provision of this Agreement shall not be construed as a waiver of the right to compel enforcement of such provision or any other provision. This Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Agreement.

ATTEST:

CITY OF SUNNYVALE ("CITY")

By \_\_\_\_\_  
City Clerk

By \_\_\_\_\_  
City Manager

APPROVED AS TO FORM:

PETERSON POWER SYSTEMS  
("CONTRACTOR")

By \_\_\_\_\_  
City Attorney

By \_\_\_\_\_  
\_\_\_\_\_  
Name and Title

## **ATTACHMENT A**

### **Scope of Services**

#### **Introduction**

This Scope of services is being written for the services of Peterson Power Systems of San Leandro, CA to provide engine maintenance services for the engines located at the Sunnyvale Water Pollution Control Plant (WPCP) and the Sunnyvale Water, Storm and Sewer Pumping Stations.

The Power Generation Facility (PGF) at the City of Sunnyvale Water Pollution Control Plant (WPCP) is an electrical generation power plant which was commissioned in 1997. The PGF is owned and operated by the City of Sunnyvale and has the capacity to generate 1.6 megawatts of electricity. The facility is equipped with two Caterpillar® Model 3516 Engine Generator sets (800 KW each) with Caterpillar® Brushless SR4 Generators. The engines are designed to burn lean fuels, including landfill gas, digester gas, and air blended natural gas or any combination of those gases.

The Water, Storm and Sewer Pumping Stations include the following engines that will need maintenance services. Baylands Pumping Station #1 contains 2 Caterpillar® engines that drive storm water pumps. Baylands Pumping Station #2 contains 5 Waukesha® engines that drive storm water pumps. The Wolfe-Evelyn and Mary-Carson Water Plants each contain an emergency pump driven by a Waukesha® engine.

#### **Description of Services**

The following are the categories of services needed in order to efficiently operate and maintain these engines and comply with strict air emission regulations. All of these services are performed on-site at the Sunnyvale WPCP, or at the designated water/sewer pump station, unless authorized sub-set of services are performed off-site at the approval of the City.

##### **1) Routine Preventative Maintenance for PGF Engines:**

These services are estimated to be needed every 1500 hours of operation or as deemed necessary based on staff observations of performance of the engines and other monitoring parameters such as oil quality, emissions testing results etc.

Routine services typically involve an overall inspection and replacement of oil and oil filters, pre-air filters, MAT sensors and spark plugs. There are also several other tasks that are performed during these services at varying intervals including but not limited to valve adjustment, valve recession, bearing inspection, O<sub>2</sub> sensor replacement, MAP sensor replacement and an inspection of the turbo chargers. Oil and coolant are regularly sampled and sent in for lab analysis.

##### **2) Top End Overhauls of the PGF Engines:**

Scheduling a top end:

Top end overhauls are scheduled according to the recession of the exhaust valve stems. This measurement provides an accurate indication of the rate of valve wear. This measurement can be used to predict when a cylinder head requires replacement.

Measure the projection of the exhaust valve stems within the first 250 service hours. This measurement is the baseline. The baseline is a reference for subsequent measurements. Measure the projection again at the initial 1500 service hour mark. Use this measurement to determine when the next measurement should be taken.

These services are estimated to be needed every 7500 – 8000 hours of operation per Caterpillar Bio-Gas guidelines (SEBU6711-12), or as deemed necessary based on staff observations of performance of the

engines and other monitoring parameters such as oil quality, emissions testing results etc. (This can be extended with proper monitoring, oil sampling and fuel conditioning.)

This work typically consists of replacing cylinder heads, turbochargers, fresh water pump, auxiliary water pump, cooling system thermostats, oil system thermostats, gaskets and seals required for this work, transformer ignition harnesses and turbo cartridges if necessary. Items that are rebuilt to Caterpillar® guidelines are the exhaust waste gate, carburetors and the gas regulator valve. Items that are cleaned and tested are the aftercoolers (as needed) and the generator. The generator windings are cleaned of dust/debris, visually inspected and are typically tested with a Megohmmeter by a qualified third party – due to the high voltage configuration. If the generator requires reconditioning, it may be sent off site for a clean, dip and bake.

Top end overhauls require more tools than preventive maintenance. The following tools are needed for restoring the engine to factory specifications (included, but not limited to):

- Torque wrenches
- Dial indicators
- Accurate measurement tools
- Cleaning equipment
- Rebuilding equipment
- Emission Analyzer

### Inspection of Components

Inspect engine components according to the instructions that are in Caterpillar® reusability publications. Refer to Guidelines for Reusable Parts and Salvage Operations, SEBF8029, "Index of Publications on Reusability or Salvage of Used Parts". Ensure that the components are operating within the appropriate specifications.

- Aftercooler
- Camshafts (not to be removed – visual through cam follower ports)
- Camshaft followers
- Governor
- Inlet air piping
- Pistons (top deck visual inspect only)
- Transformers

### Replacing of Components

Replace the following components during a top end overhaul.

- Cylinder heads and gaskets
- Oil temperature regulators
- Water temperature regulators
- Various gaskets, seals and O-rings as required

### Rebuilding of Components

Rebuild/Replace the following components per inspections during a top end overhaul:

- Carburetor
- Exhaust bypass

- Gas regulator
- Turbocharger
- Water pumps

### Additional Services

Periodic inspection of the turbocharger will determine when the turbocharger will require an overhaul. In a few applications, the turbocharger may require rebuilding prior to the top end overhaul. An example is an application with loads that vary frequently. In these cases, rebuilding the turbocharger normally occurs separately from rebuilding the cylinder heads. Some applications can operate longer before the turbocharger requires rebuilding. These services will be determined and requested by the City as necessary.

Unexpected problems may be found during a top end overhaul. Plan to correct these problems, if necessary.

- Buildup in the cylinders from excessive oil consumption
- Buildup in the cylinders from contamination of the fuel
- Plugging of the aftercooler from coolant that is poorly maintained
- Plugging of the aftercooler from contamination of the inlet air
- Degradation of the oil cooler from hydrogen sulfide in the fuel
- Leaks in the internal coolant passages in water cooled exhaust manifolds

### **3) PGF Major Overhaul**

In-frame overhauls are conducted on-site at the WPCP. This work typically consists of replacing cylinder heads, pistons, liners, the installation of new main bearings and rod bearings. This also includes an inspection and evaluation of potentially reusable components. There is also an inspection of turbochargers, aftercooler, water pump, camshafts, lifter assemblies and thrust plate which includes advising the City on the condition of these components. In addition to the work on the engine itself, there may also be work performed on the Fisher gas control valve and the generator may be shipped out to a third party for inspection and refurbishing. The final assembly shall be painted. The engine must be assembled according to Caterpillar<sup>®</sup> guidelines and start-up of the engine will include verification of operating parameters and testing for performance.

Generally, a major overhaul is performed at every fifth top end overhaul (37,500 – 40,000 hours), per Caterpillar Bio-Gas guidelines (SEBU6711-12). The need for a major overhaul is determined by several factors. Some of those factors are the same factors that determine the in-frame overhaul (included, but not limited to):

- An increase of oil consumption
- An increase of crankcase blowby
- A decrease and variation of cylinder compression
- Other factors must also be considered for determining a major overhaul:
  - The service hours of the engine
  - The wear metal analysis of the lube oil
  - An increase in the levels of noise and vibration

A major overhaul includes all of the work that is done for top end overhauls and in-frame overhauls. A major overhaul includes additional parts and labor. Additional parts and labor are required in order to



completely rebuild the engine. In some cases, the engine is relocated for disassembly. For the major overhaul, all of the bearings, seals, gaskets, and components that wear are disassembled. The parts are cleaned and inspected. If necessary, the parts are replaced. The crankshaft is measured for wear. The crankshaft may require regrinding. Alternatively, the crankshaft may be replaced with a Caterpillar® replacement part.

Crank, block, cam, and rods are sent to third party to be inspected, measured and documented. The city will be informed of the results and quoted for any parts or work that will need to take place.

### Inspecting Components

Inspect the following components according to the instructions that are in Caterpillar® reusability publications. Refer to Guidelines for Reusable Parts and Salvage Operations, SEBF8029, "Index of Publications on Reusability or Salvage of Used Parts".

- Aftercooler
- Camshafts
- Camshaft followers
- Connecting rods
- Crankshaft
- Gear train
- Governor
- Inlet air piping
- Oil cooler
- Oil pump
- Pistons
- Transformers

### Replacing of Components

Replace the following components during the major overhaul.

- Camshaft bearings
- Connecting rod bearings
- Cylinder liners
- Piston rings
- Cylinder gaskets, and head bolts (if necessary)
- Gaskets and seals
- Gear train bearings
- Main bearings
- Oil temperature regulators
- Water temperature regulators
- Wiring harnesses (internal harness only)
- Crankshaft vibration damper 1.

### Rebuilding of Components

Rebuild/Replace per inspections the following components during the major overhaul.

- Carburetor
- Exhaust bypass
- Gas regulator
- Prelube pump (as needed)
- Starting motor (as needed)
- Turbochargers
- Water pumps
- Cylinder heads

#### **4) Water and Sewer Pumping Station Routine Maintenance**

- Baylands #1 – (2) Caterpillar<sup>®</sup> Model # 3406 (Serial # 4FD02816 & 4FD02817); Carl Rd. East of Water Pollution Control Plant
- Baylands #2 – (5) Waukesha<sup>®</sup> Model # F554G5 (Serial # 139746, 139747, 139748, 139749, R8198289); 999 E Caribbean Dr. (East side of Baylands Park)
- Wolfe-Evelyn – (1) Waukesha<sup>®</sup> Model # F2894GU; 753 Ajax Ct.
- Mary Carson – (1) Waukesha<sup>®</sup> Model # F2894GU; 155 Mary Ave.

Baylands Pumping Station #1 contains 2 Caterpillar<sup>®</sup> engines that drive storm water pumps. These engines are only in operation during storms and log a relatively low amount of hours annually. These engines have routine services that include changing the oil and oil filters, air filters and spark plugs as well as inspecting various other components to ensure successful operation.

In addition, there may be requests to perform routine service and/or corrective & emergency maintenance to the Waukesha<sup>®</sup> engines at other pumping stations. Baylands Pumping Station #2 contains five Waukesha<sup>®</sup> engines that also drive storm water pumps. The Wolfe-Evelyn and Mary-Carson Water Plants each contain an emergency pump driven by a Waukesha<sup>®</sup> engine. In the event of a power failure in which the primary electric motor driven pumps cannot operate, the emergency pump will operate to maintain pressure in the water distribution system. These engines also log a relatively low amount of hours annually. There are routine services that include changing the oil and oil filters, air filters and spark plugs as well as inspecting various other components to ensure successful operation.

#### **5) Emergency Repairs and Services**

Diligent preventative maintenance efforts have helped to minimize the frequency of emergency repairs at the PGF and Water, Storm and Sewer Pumping Stations with respect to the engines. However, there are occasions when unscheduled downtime occurs. Some examples of emergency issues that have been addressed in the past include sticking valves, clogged aftercoolers & spark arrestors, oil and coolant leaks, oil/water pump failures, high emissions readings, unstable operation, inability to produce rated electrical load, sensor failures and difficulty synchronizing to the PG&E power grid. When such issues arise or at times of emergency shut downs, it is anticipated that emergency services will be required which could include but not limited to:

- Provision of temporary generator and associated operations
- Expedited parts delivery.
- Available qualified mechanics to perform repairs.

#### **6) Additional Work**

Any additional repairs that are discovered during maintenance activities on the engines will require a detailed report and a quote to be provided to the City for approval prior to authorization of work.

### **Performance Clause**

Following a top end or major overhaul of the PGF engines, the performance of each engine will be closely monitored. Engines shall be emission compliant with a GEICO phi-modifier setting no less than -1.00 and Rated MAP of 31.25 for a minimum period of 120 days following overhauls. 90% payment will be made following the completion of service and submittal of an accurate, itemized invoice. The remaining 10% will be released once the 120 day period has ended. Frequent failures, the presence of excessive wear and/or the accelerated loss of adjustment for emissions tuning shall result in the continued withholding of 10% payment until these issues are resolved to the reasonable satisfaction of the City. The above clause would be waived should the emission testing failure as described above is proven to be related to the feed gas conditions:

- Conditioning of the gas coming in to the plant. (scrubber and blender)
- Impact of the bio-mist system

This proof shall be as demonstrated by the 250 hour inspection report and documented continuous monitoring of quality of gas.

### **Authorization of Services**

The City will request a detailed scope and a quote for any of the service categories above as needed and will negotiate with Peterson Power on the details of the scope and costs. Work schedule and time of work is to be approved by the City before the start of any work. Upon completion of a mutually agreed scope, cost and schedule, the City will issue discreet notice to proceed for various job tasks to be performed.

EXHIBIT "A"



***POWER GENERATION ♦ INDUSTRIAL ♦ MARINE***  
*Service Charge Out Rates for the*  
*City of Sunnyvale, CA*

*Effective 11-12-2014*

*CA Contractors License C10-507000*

<i>LABOR CODES</i>	<i>DESC.</i>	<i>S/T</i>	<i>O/T</i>	<i>D/T</i>
SHP	In-Shop Labor	\$164.00	\$246.00	\$328.00
FLD	Field Labor	\$170.00	\$255.00	\$340.00
TVL	Field Labor Travel	\$170.00	\$255.00	\$255.00
CSA	Contract Service Labor	\$152.00	\$228.00	\$304.00

- ♦ *3 year term, subject to annual escalation of the lesser of 3% or CPI-U for San Francisco Urban*
- ♦ *Misc. Hardware 1.93% of all parts & service*
- ♦ *Environmental charges 1.5% of all labor totals*
- ♦ *Labor rates INCLUDE mileage*

## EXHIBIT "B"

### INSURANCE REQUIREMENTS

CONTRACTOR shall obtain, at its own expense and from an admitted insurer authorized to operate in California, the insurance coverage detailed below and shall submit Certificate(s) of Insurance to the City of Sunnyvale, Purchasing Division, 650 West Olive Ave, PO Box 3707, Sunnyvale, CA 94088-3707; fax (408) 730-7710.

CONTRACTOR shall take out and maintain during the life of the contract **Workers' Compensation and Employer's Liability Insurance** for its employees. The amount of insurance shall not be less than \$1,000,000 per accident for bodily injury or disease.

CONTRACTOR shall take out and maintain during the life of the contract such **Commercial General Liability Insurance** as shall protect CONTRACTOR, CITY, its officials, officers, directors, employees and agents from claims which may arise from services performed under the contract, whether such services are performed by CONTRACTOR, by CITY, its officials, officers, directors, employees or agents or by anyone directly or indirectly employed by either. The amount of insurance shall not be less than the following: Single Limit Coverage Applying to Bodily and Personal Injury Liability and Property Damage: \$1,000,000.

The liability insurance shall include, but shall not be limited to:

- Protection against claims arising from bodily and personal injury and damage to property, resulting from CONTRACTOR'S or CITY's operations and use of owned or non-owned vehicles.
- Coverage on an "occurrence" basis.
- Broad form property damage liability. Deductible shall not exceed \$5000 without prior written approval of CITY.
- Notice of cancellation to CITY's Purchasing Division at least thirty (30) days prior to the cancellation effective date.

The following endorsements shall be attached to the liability insurance policy, and copies shall be submitted with the Certificate(s) of Insurance:

- The policy must cover complete contractual liability. Exclusions of contractual liability as to bodily injuries, personal injuries and property damage must be eliminated.
- CITY must be named as additional named insured with respect to the services being performed under the contract. *Simply indicating on the certificate that the certificate holder is named as additional insured is not acceptable; an endorsement must be provided.*
- The coverage shall be primary insurance so that no other insurance effected by CITY will be called upon to contribute to a loss under this coverage.

CONTRACTOR shall take out and maintain for the life of the contract **Automobile Liability Insurance** on vehicles used in the performance of work covered under this contract. The amount of insurance shall not be less than \$1,000,000 per accident for bodily injury and property damage. ISO Form CA 0001 is required.