PROFESSIONAL SERVICES AGREEMENT
Process Simulation Model Development for the Central Generation Facilities
Specification No. CS-2023-1404BD

This PROFESSIONAL SERVICES AGREEMENT (hereinafter referred to as "Agreement") is made and entered into as of the date fully executed below, by and between Orange County Sanitation District (hereinafter referred to as "OC San") and IntelliFlux Controls, Inc. (hereinafter referred to as "Consultant"), and collectively referred to herein as the "Parties."

R E C I T A L S

WHEREAS, OC San desires to obtain process modeling software and implementation services as described in Exhibit "A" attached hereto and incorporated herein by this reference ("Services"); and

WHEREAS, Consultant is qualified to provide the Services by virtue of experience, training, and expertise; and

WHEREAS, OC San desires to engage Consultant to render the Services as provided herein; and

WHEREAS, OC San selected Consultant to provide the Services in accordance with most current OC San's Purchasing Ordinance; and

WHEREAS, on December 6, 2023, OC San's Operations Committee, by minute order, authorized execution of this Agreement.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises and benefits specified below, the Parties agree as follows:

1. **General**.
   1.1 This Agreement and all exhibits hereto are made by OC San and the Consultant.

   1.2 The following exhibits, in order of precedence, are incorporated by reference and made part of this Agreement.

   Exhibit "A" – Scope of Work
   Exhibit "B" – Proposal (including Best and Final Offer)
   Exhibit "C" – Determined Insurance Requirement Form
   Exhibit "D" – Contractor Safety Standards
   Exhibit "E" – Human Resources Policies

   1.3 In the event of any conflict or inconsistency between the provisions of this Agreement and any of the provisions of the exhibits hereto, the provisions in the Agreement shall control and thereafter the provisions in the document highest in precedence shall be controlling.

   1.4 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or actions incurred or undertaken by Consultant as a result of work performed in anticipation of purchases of the Services by OC San.

1.5   Work Hours: All work and meetings with OC San staff shall be scheduled Monday through Thursday, between the hours of 6:00 a.m. and 3:30 p.m. OC San will not pay for travel time.

1.6   Days: Shall mean calendar days, unless otherwise noted.

1.7   OC San holidays (non-working days) are as follows: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.

1.8   Access to Premises. OC San shall provide Consultant with reasonable and timely access to the sites and personnel necessary for Consultant to perform its obligations under this Agreement. OC San shall allow Consultant personnel reasonable access to OC San site and facilities (telephone, facsimile, parking, etc.) during normal business hours and at other reasonable times as requested by Consultant and pre-approved by OC San. The assistance or presence of OC San's personnel will not relieve Consultant of any of its responsibilities under this Agreement.

1.9   Background Checks and Removal of Personnel. Prior to being allowed to perform any work on this Project, all non-OC San personnel assigned to the Project may be required to submit to and pass a background check by the Fountain Valley Police Department in California. In addition, OC San shall have the sole and exclusive right to require Consultant to immediately remove any individual from the Project for any reason deemed to be in the best interests of OC San. Consultant shall replace any employee removed from the Project within ten (10) business days of said removal.

1.10   The provisions of this Agreement may be supplemented, amended, or waived only by an amendment executed by authorized representatives of both Parties.

1.11   All approvals or consents required or contemplated by this Agreement must be in writing to be effective.

1.12   The various headings in this Agreement are inserted for convenience only and shall not affect the meaning or interpretation of this Agreement or any paragraph or provision hereof.

2.   Definitions.
2.1   As-Built Documentation. The term "As-Built Documentation" means the Baseline Documentation plus the Documentation for any Configuration Changes and Custom Modifications. All "As-Built Documentation" shall supplement and not conflict with the terms of this Agreement. In the event of a conflict, the terms of this Agreement shall prevail.

2.2   Baseline Documentation. The term "Baseline Documentation" means original system configuration documentation prior to upgrades or changes.

2.3   Configuration Changes. The term "Configuration Changes" is defined as any modification or changes other than a Custom Modification.

2.4   Consultant Application Software. The term "Consultant Application Software" is

defined as any Software owned or sublicensed, installed, and/or configured by Consultant as a component of the Services provided, whether in machine readable or printed form, including, but not limited to, any applications, modules, subsystems, Interfaces, Configuration Changes, Custom Modifications, Updates, and Documentation.

2.5 <u>Custom Modification</u>. The term "Custom Modification" is defined as a modification of the Consultant Application Software Source Code or data base structure, which provides new or improved functions or features to address specific requirements of this Agreement.

2.6 <u>Defect</u>. The term "Defect" is defined as any error, failure, deficiency, or any other unacceptable variance or failure of the System or any component thereof to fully conform to the warranties and requirements described in this Agreement. With respect to the Consultant Application Software, the term "Defect" is defined as any error, failure, or deficiency or any other unacceptable variance from any required, specified, or expected program behaviors as may be required by OC San or necessary for the Consultant Application Software to operate correctly and in full compliance with the terms of this Agreement. This includes expected program behaviors as described in any Consultant Application Software Documentation. In the event of a conflict between this Agreement and documentation provided by Consultant to OC San, the terms and conditions of this Agreement shall prevail.

2.7 <u>Documentation</u>. The term "Documentation" is defined as all written, electronic, or recorded works including all "As-Built Documentation" that describe the uses, features, functional capabilities, performance standards, and reliability standards of the System, or any subsystem, component, or Interface, and that are published or provided to OC San by Consultant or its subcontractors, including, without limitation, all end user and System administrator manuals, help files, training aids and manuals, training and support guides, program listings, data models, flow charts, logic diagrams, and other materials related to or for use with the System.

2.8 <u>Fix Pack</u>. The term "Fix Pack" is defined as a formal release of programming code and Documentation that provides corrections to any Consultant Application Software programs including, but not limited to, bug fixes, error corrections, and patches.

2.9 <u>Functional, Performance, and Reliability Specifications and Requirements</u>. The term "Functional, Performance, and Reliability Specifications and Requirements" is defined as all definitions, descriptions, requirements, criteria, warranties, and performance standards relating to the System set forth in: (a) this Agreement; (b) any mutually agreed upon amendment; and (c) any functional and/or technical specifications which are published or provided by Consultant or its licensors or suppliers from time to time with respect to the System or any Products.

2.10 <u>Go-Live Support</u>. The term "Go-live Support" is as described in "Exhibit "A" Scope of Work.

2.11 <u>Interfaces</u>. The term "Interfaces" is defined as one or more of the specialized software applications developed or sublicensed by Consultant and installed as a part of the Project for the purpose of sharing information (data) between Consultant and/or Consultant Application Software and any other software program or device. Functional requirements for each Interface to be included as a part of the System are

provided Exhibit "A", Scope of Work.

2.12 <u>Products</u>. The term "Products" is defined as all Software listed in "Exhibit "A", Scope of Work.

2.13 <u>Project</u>. The term "Project" is defined as the totality of Consultant's obligation under this Agreement to develop, supply, install, configure, test, implement, and maintain the System.

2.14 <u>Services</u>. The term "Services" is defined as the implementation, development, training, configuration, loading, testing, project management, and other services to be provided by Consultant under this Agreement, including, without limitation, the tasks detailed in Exhibit "A", Scope of Work.

2.15 <u>Software</u>. The term "Software" includes the following components provided and licensed by Consultant under this Agreement: (a) Consultant Application Software; (b) Third-Party Software; (c) Custom Modifications, and (d) Interfaces.

2.16 <u>Source Code</u>. The term "Source Code" is defined as a computer program in its original programming language (such as FORTRAN or C) before translation into object code usually by a compiler.

2.17 <u>System</u>. The term "System" is defined as the collective whole of all Products and Services to be purchased, developed, licensed, supplied, installed, configured, tested, and implemented by Consultant under this Agreement.

2.18 <u>System Administrator Documentation</u>. Is defined as that portion of the Documentation addressing the operation and maintenance functions of the System.

2.19 <u>Third-Party Software</u>. The term "Third-Party Software" is defined as any Software to be supplied under this Agreement that is purchased or licensed directly from any source external to Consultant for use with or integration into the System.

2.20 <u>Updates</u>. The term "Updates" is defined as modifications, improvements, additions, and corrections to the Products and/or related Documentation, including functional and/or product enhancements, bug fixes, patches, new releases, new versions, and replacement modules or products that Consultant makes generally available to its customers with or without an additional fee.

2.21 <u>User Acceptance</u>. The term "User Acceptance" shall be defined as that date on which all Services under section titled "Deliverables" in Exhibit "A", Scope of Work have been successfully completed by Consultant and accepted by OC San.

2.22 <u>Work Product</u>. The term "Work Product" is defined as the Products and Services and all other programs, algorithms, reports, information, designs, plans, and other items developed by Consultant under this Agreement, including all partial, intermediate or preliminary versions thereof.

3. **<u>Scope of Work</u>.**
3.1 Consultant shall provide the Services identified in Exhibit "A" in a competent, professional, and satisfactory manner in accordance with generally accepted industry and professional standards, including fiduciary standards, ethical practices, and

standards of care and competence for its trade/profession. Consultant agrees to comply with all applicable Federal, State, and local laws and regulations.

3.2 <u>Modifications to Scope of Work</u>. OC San shall have the right to modify the Scope of Work at any time. All modifications must be made by an amendment signed by both Parties.

3.3 <u>Familiarity with Work</u>. By executing this Agreement, Consultant warrants that: (a) it has investigated the work to be performed; (b) it understands the facilities, difficulties, and restrictions of the work under this Agreement; and (c) it has examined the site of the work and is aware of all conditions at the site. Should Consultant discover any latent or unknown condition materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at Consultant's risk, until written instructions are received from OC San.

3.4 <u>Performance</u>. Time is of the essence in the performance of the provisions hereof.

4. <u>License</u>.
4.1 <u>Grant of License</u>.
    4.1.1 Consultant hereby grants to OC San a perpetual, irrevocable, nonexclusive, and nontransferable license under applicable copyrights and/or trade secrets (either site, node locked or per user as specified in Exhibit "A",) to use all Consultant application software provided under this Agreement. OC San shall have the right to use all Consultant application software or any portion thereof on any equipment locked on a single computer node (as determined by a specific LAN address) as a site license or concurrently on a number of computer nodes so long as the number of concurrent Users does not exceed the number licensed for the LAN, or on one or more backup computer nodes.

    4.1.2 OC San shall have the right to use all Consultant application software as may be necessary in order to operate the system purchased under this Agreement. In addition, OC San shall have the right to use the Consultant application software as necessary to (a) operate the system (b) conduct internal training and testing, and (c) perform disaster recovery, backup, archive, and restoration testing and implementation as may be required in OC San's judgment. This license shall apply to all commercially available updates throughout the term of this Agreement. OC San shall have the right to use all Consultant application software licensed under this Agreement on any equipment at any facility and at any location and may make as many copies of the software as it desires to support its authorized use of the software, provided the copies include Consultant's or the third-party owner's copyright or other proprietary notices.

4.2 <u>User Acceptance</u>.
    4.2.1 All license rights of third-party software shall originate from the manufacturer. All third-party software licenses shall be provided to OC San and become effective at the time the product is used by OC San in a live environment.

    4.2.2 The approval of Consultant for OC San to use Consultant Application Software and Third-Party Software and OC San's use of the software shall not constitute a waiver of OC San's right to reject the System, in whole or in part, if the requirements for User Acceptance are not met.

4.3 <u>Limitations on License</u>.
Except as licensed to OC San, Consultant retains all of its current rights, title, and interest in the Consultant Application Software, including derivative works, custom modifications, configuration changes, and updates. Unless authorized by Consultant or required by law, OC San will not: (1) make available or distribute all or part of the software to any third party by assignment, sublicense, or any other means; or (2) disassemble, decompile, or reverse engineer the software, or allow any third party to do so.

5. Security.

5.1 Certain software packages are required to operate in conjunction with a hardware lock device or in conjunction with license administration software and a license authorization key provided by Consultant or its representative. OC San shall take no steps to avoid or defeat the purpose of any required lock device or authorization key. Use of any software package without a required lock device or authorization key shall be unlicensed under this Agreement.

5.2 <u>Restricted Access</u>.
   5.2.1 OC San will use every reasonable method to restrict access to the Consultant Application Software, or documentation related thereto, to persons not authorized to use the Consultant Application Software under the terms of this Agreement.
   5.2.2 OC San will not copy the Consultant Application Software or documentation except as necessary for use under this Agreement.
   5.2.3 OC San will not decrypt, reverse compile, or disassemble the Consultant Application Software.
   5.2.4 OC San will not export or re-export the Consultant Application Software or documentation.
   5.2.5 OC San will abide by all applicable Federal and State trademark and copyright laws.

6. Warranty.

6.1 <u>System Warranty</u>. Consultant warrants that the System will meet the Functional, Performance, and Reliability Specifications and Requirements as defined in this Agreement. As applicable, the System and/or each of its subsystems, components and Interfaces will be capable of operating fully and correctly in conjunction with the System hardware. Consultant warrants that for the term of this Agreement, the System will perform as described in Exhibit "A", Scope of Work in material and workmanship and will remain in good working order. In the event the System does not meet these warranties, Consultant shall provide, at no charge, the necessary software, hardware, and/or services required to attain the levels or standards contained in these warranties.

6.2 <u>Consultant Application Software Warranties</u>. Consultant warrants that it owns or otherwise has the right to license the Consultant Application Software to OC San and that it possesses all rights and interests necessary to enter into this Agreement. In addition, Consultant warrants that:

   6.2.1 All Consultant Application Software licensed under this Agreement is free of known Defects, viruses, worms, trojan horses, or otherwise (except for documented security measures such as password expiration functions);

6.2.2   During the term of the Agreement; the Consultant Application Software will meet or exceed the Functional, Performance, and Reliability Specifications and Requirements herein;

6.2.3   Consultant Application Software is and will be general release versions that have been fully tested at Consultant's site in accordance with best industry practices and are not beta or pre-release versions (unless agreed to in writing by OC San); and

6.2.4   Custom Modifications and Interfaces have been fully tested in accordance with best industry practices and are free of known Defects. Consultant further agrees that during the term of this Agreement, Consultant will provide OC San, if OC San so desires, with any Updates at no additional cost (including any and all costs associated with the installation of those Updates) immediately upon their commercial availability to any other entity.

6.3 <u>Work Quality Warranty</u>.   Consultant warrants that all work performed by Consultant and/or its subcontractors under this Agreement will conform to best industry practices and will be performed in a professional and workmanlike manner by staff with the necessary skills, experience, and knowledge to do so.

6.4 <u>Regulatory Warranty</u>.   Consultant warrants that, for the term of this Agreement, the System will comply with all processing and reporting requirements for State and Federal laws and regulations. If the Software requires updating due to a change in a State or Federal law or regulation affecting OC San, Consultant will provide these changes per a mutually agreed to schedule at no additional charge to OC San. Notwithstanding this provision, in no event shall Consultant provide said update later than the date required by the State or Federal law or regulation affecting OC San. In the event OC San is notified of a change in State or Federal law or regulation that requires updating the Software, OC San will notify Consultant of that change as soon as reasonably possible.

6.5 <u>Documentation Warranty</u>. Consultant warrants that, for the term of this Agreement, the Documentation for all licensed Consultant Application Software will be complete and accurate in all material respects. The Documentation will be revised to reflect all Updates and Interfaces provided by Consultant under this Agreement. This includes Documentation on any Custom Modification or Configuration Changes made to the System by Consultant during the installation process.

6.6 <u>Service Warranty</u>. During the term of this Agreement, Consultant warrants that it will remedy any failure, malfunction, Defect, or nonconformity in the System, as follows:

6.6.1   *<u>Priority One (P1) Defects</u>*. For purposes of this warranty, a P1 Defect includes, but is not limited to, loss of data, data corruption, a System or subsystem abort, any condition where productive use of the System or any component thereof is prohibited and no acceptable workaround is available. Examples of P1 Defects include, but are not limited to:

5.6.1.1 System is down;

5.6.1.2 Application, module or Interface is down or non-operational;

5.6.1.3 An Interface or application critical to System operation is substantially

impaired or problematic;

5.6.1.4 Loss of data or data corruption after data has been entered;

5.6.1.5 A subsystem or component thereof is non-functional;

5.6.1.6 Productive use is prohibited;

5.6.1.7 Two or more workstations or mobile devices lock up or malfunction intermittently; or

5.6.1.8 A user cannot log on to the System.

6.6.2 *Priority Two (P2) Defects*. For purposes of this warranty a P2 Defect includes, but is not limited to, compromise of the primary purpose of the System, subsystem, or Interface to an external system. Productive use by the end user is substantially impacted and an acceptable workaround is not available. Examples of P2 Defects include, but are not limited to:

5.6.2.1 A Software function does not work correctly (as defined by Scope of Work);

5.6.2.2 The user cannot produce a report with correct calculations;

5.6.2.3 System, subsystem, or an Interface performance is deemed unacceptable per the Functional, Performance, and Reliability Specifications and Requirements;

5.6.2.4 Incorrect cross streets are displayed on a verified address or location;

5.6.2.5 Cannot create a scheduled event; or

5.6.2.6 A single workstation or mobile device locks up or malfunctions intermittently.

6.6.3 *Priority Three (P3) Defects*. For purposes of this warranty, a P3 Defect includes, but is not limited to, incomplete operation of a System component which impacts productivity of staff but an acceptable workaround is generally available. Examples of P3 Defects include but are not limited to:

5.6.3.1 Single workstation or mobile device locks up intermittently but infrequently;

5.6.3.2 Minor deficiencies occur intermittently in any component of the System;

5.6.3.3 A mapping function doesn't work, but the failure does not interfere with the user's ability to perform required tasks;

5.6.3.4 A report does not function or report provides incorrect results; or

5.6.3.5 An incorrect message is presented in a dialog box.

6.6.4 *Priority Four (P4) Defects*. For purposes of this warranty, a P4 Defect consists of those problems deemed by OC San to be mainly cosmetic. Examples of P4 Defects include, but are not limited to:

5.6.4.1 A misspelled word in the header of a report or in a help file;

5.6.4.2 A minor error in output that does not interfere with the correct outputting of statistics from the system;

5.6.4.3 Minor printing errors in a report that does not impede OC San's ability to utilize the report for the required purpose;

5.6.4.4 Minor variances in text where the help file does not match the Documentation;

5.6.4.5 Minor variances in text where the Documentation does not match the functionality but the System works properly; or

5.6.4.6 A print button does not work, but the user can still print without opening or closing multiple windows or loosing data or rebooting the System.

6.6.5 *Multiple Failures*. Any situation involving multiple, contemporaneous failures, regardless of their individual priorities, will be regarded as a Priority One Defect if, in OC San's determination, the situation results in OC San having essentially no productive use of the System or a major subsystem.

6.6.6 *Permanent Cure*. If OC San accepts a workaround or other temporary cure as the remedy for any reported Defect, Consultant shall provide and install at no cost to OC San a permanent correction or cure and installation support within ten (10) days after the permanent cure becomes available.

6.6.7 *Third-party Warranty Coverage*. Third-party products are provided with a pass-thru-warranty from the original manufacturer.

7. **Infringement Claims**

If an infringement claim occurs, Consultant has thirty (30) days after the receipt of OC San's written notice of the claim or the date on which Consultant first becomes aware of the claim, whichever is sooner, to either: (a) procure for OC San the right to continue using the affected Product, Service, subsystem, component or Interface and deliver or provide the Product, Service, subsystem, component, or Interface to OC San; or (b) repair or replace the infringing Product, Service, subsystem, component, or Interface so that it becomes non-infringing, provided the performance of the System or any subsystems, components, or Interfaces is not adversely affected by the replacement or modification. In the event Consultant is unable to comply with either subsection (a) or (b) of this paragraph within thirty (30) days, OC San may terminate this Agreement without any further obligation to Consultant. In the event of termination, in addition to any other legal remedies available to OC San, Consultant will refund OC San, within ten (10) days of OC San's notice of termination, the license fees OC San paid to Consultant for the Product, Service, subsystem, component, or Interface. If the inability to comply with either subsection (a) or (b) of this paragraph causes the System to fail to meet the Functional, Performance, and Reliability Specifications and Requirements or to otherwise become ineffective, Consultant will refund OC San all fees paid to Consultant under this Agreement.

8. Term.
   8.1 The Services shall be completed within one hundred eighty (180) calendar days from the effective date of the Notice to Proceed.

   8.2 Extensions. The term of this Agreement may be extended only by an amendment signed by both Parties.

9. Compensation.
   9.1 As compensation for the Services provided under this Agreement, OC San shall pay Consultant a total amount not to exceed One Hundred Fifty Thousand Three Hundred Eight Dollars ($150,308.00).

   9.2 Consultant shall provide OC San with all required premiums and/or overtime work at no charge beyond the amount specified above.

10. Payments and Invoicing.
   10.1 OC San shall pay itemized invoices for Milestones, completed in accordance with Exhibit "A" and consistent with Exhibit "B" thirty (30) days from receipt of the invoice and after approval by OC San's Project Manager or designee.

   10.2 OC San shall be the determining party, in its sole discretion, as to whether the Services have been satisfactorily completed.

   10.3 Consultant shall submit its invoices to OC San Accounts Payable by electronic mail to APStaff@OCSan.gov. In the subject line include "INVOICE" and the Purchase Order Number.

11. California Department of Industrial Relations Registration and Record of Wages.
   11.1 To the extent Consultant's employees and/or its subconsultants perform work related to this Agreement for which Prevailing Wage Determinations have been issued by the California Department of Industrial Relations (DIR) as more specifically defined under Labor Code section 1720 et seq., prevailing wages are required to be paid for applicable work under this Agreement. It is Consultant's responsibility to interpret and implement any prevailing wage requirements and Consultant agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

   11.2 Consultant and its subconsultants shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the work is subject to compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).

   11.3 Pursuant to Labor Code section 1773.2, a copy of the prevailing rate of per diem wages is available upon request at OC San's principal office. The prevailing rate of per diem wages may also be found at the DIR website for prevailing wage determinations at http://www.dir.ca.gov/DLSR/PWD.

   11.4 Consultant and its subconsultants shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e). Pursuant to Labor Code sections 1773.2 and 1771.4(a)(2), Consultant shall post a copy of the prevailing rate of per diem wages at the job site.

11.5 Consultant and its subconsultants shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. Consultant and its subconsultants shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the Consultant and its subconsultants shall furnish a copy of all certified payroll records to OC San and/or the general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.

    11.5.1 As a condition to receiving payments, Consultant agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Agreement.

11.6 The Consultant and its subconsultants shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the Consultant and any of its subconsultants shall forfeit to OC San a penalty of not more than two hundred dollars ($200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any work.

    11.6.1 In addition to the penalty and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Consultant or its subconsultant.

11.7 Consultant and its subconsultants shall comply with Labor Code sections 1810 through 1815. Consultant and its subconsultants shall restrict working hours to eight (8) hours per day and forty (40) hours per week, except that work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The Consultant shall forfeit, as a penalty to OC San, twenty-five dollars ($25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

11.8 Consultant and its subconsultants shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by Consultant or any subconsultant.

11.9 Consultant shall include, at a minimum, a copy of the following provisions in any

contract it enters into with any subconsultant: Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860, and 1861.

11.10   Pursuant to Labor Code sections 1860 and 3700, the Consultant and its subconsultants will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, Consultant, by accepting this Agreement, certifies that:

> "I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

Consultant shall ensure that all its contracts with its subconsultants provide the provision above.

12. **Key Personnel**. Personnel, as provided in Exhibit "B," are considered "key" to the work under this Agreement and will be available for the term of the Agreement. No person designated as key under this Agreement shall be removed or replaced without prior written consent of OC San. If OC San asks Consultant to remove a person designated as key under this Agreement, Consultant agrees to do so immediately regardless of the reason, or the lack of reason, for OC San's request. Consultant shall assign only competent personnel to perform Services under this Agreement.

13. **Ownership of Documents.** All drawings, specifications, reports, records, documents, memoranda, correspondence, computations, and other materials prepared by Consultant, its employees, subconsultants, and agents in the performance of this Agreement shall be the property of OC San and shall be promptly delivered to OC San upon request of OC San's Project Manager or designee or upon the termination of this Agreement and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by OC San of its full rights of ownership of the documents and materials hereunder. Any use of such completed documents for other projects and/or use of incomplete documents without specific written authorization by the Consultant will be at OC San's sole risk and without liability to Consultant. Consultant shall ensure that all its contracts with its subconsultants provide for assignment to OC San of any documents or materials prepared by them.

14. **Ownership of Intellectual Property**.
    14.1 Consultant agrees that all designs, plans, reports, specifications, drawings, schematics, prototypes, models, inventions, and all other information and items made during the course of this Agreement and arising from the Services (hereinafter referred to as "New Developments") shall be and are assigned to OC San as its sole and exclusive property.

    14.2 Consultant agrees to promptly disclose to OC San all such New Developments. Upon OC San's request, Consultant agrees to assist OC San, at OC San's expense, to obtain patents or copyrights for such New Developments, including the disclosure of all pertinent information and data with respect thereto, the execution of all applications, specifications, assignments, and all other instruments and papers which OC San shall deem necessary to apply for and to assign or convey to OC San, its successors and

assigns, the sole and exclusive right, title, and interest in such New Developments. Consultant agrees to obtain or has obtained written assurances from its employees and contract personnel of their agreement to the terms hereof regarding New Developments and confidential information.

14.3 Consultant warrants that Consultant will have good title to any New Developments and the right to assign New Developments to OC San free of any proprietary rights of any other party or any other encumbrance whatever.

14.4 The originals of all computations, drawings, designs, graphics, studies, reports, manuals, photographs, videotapes, data, computer files, and other documents prepared or caused to be prepared by Consultant or its subconsultants in connection with the Services hereunder shall be delivered to and shall become the exclusive property of OC San. OC San may utilize such documents, at its own risk, for OC San's applications on other projects or extensions of this project.

15. **Right to Review Services, Facilities, and Records.**
15.1 OC San reserves the right to review any portion of the Services performed by Consultant under this Agreement and Consultant agrees to cooperate to the fullest extent possible in such endeavor.

15.2 Consultant shall furnish to OC San such reports, statistical data, and other information pertaining to Consultant's Services as shall be reasonably required by OC San to carry out its rights and responsibilities under its agreements with its bondholders or noteholders and any other agreement relating to the development of the project(s) and in connection with the issuance of its official statements and other prospectuses with respect to the offering, sale, and issuance of its bonds and other obligations.

15.3 The right of OC San to review or approve drawings, specifications, procedures, instructions, reports, test results, calculations, schedules, or other data that are developed by Consultant shall not relieve Consultant of any obligation set forth herein.

16. **Conflict of Interest and Reporting.**
16.1 Consultant shall, at all times, avoid conflicts of interest or appearance of conflicts of interest in performance of this Agreement.

16.2 Consultant affirms that, to the best of its knowledge, there exists no actual or potential conflict between Consultant's families, business, or financial interest and the Services under this Agreement and in the event of change in either its private interests or Services under this Agreement, it shall raise with OC San any question regarding possible conflict of interest which may arise as a result of such change.

17. **Changes in Control of Consultant**. In the event of a change in Control of Consultant, OC San shall have the option of terminating this Agreement by written notice to Consultant. Consultant shall notify OC San within ten (10) days of the occurrence of a change in Control. As used in this section, "Control" is defined as the possession, direct or indirect, of either:

17.1 The ownership or ability to direct the voting of fifty-one percent (51%) or more of the equity interests, value, or voting power in Consultant; or

17.2 The power to direct or cause the direction of the management and policies of Consultant, whether through ownership of voting securities, by contract, or otherwise.

18. **Damage to OC San's Property.** Any of OC San's property damaged by Consultant, any subconsultant, subcontractor, or by the personnel of either will be subject to repair or replacement by Consultant at no cost to OC San.

19. **Freight (F.O.B. Destination).** Consultant assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Agreement.

20. **Audit Rights.** Consultant agrees that, during the term of this Agreement and for a period of three (3) years after its expiration or termination, OC San shall have access to and the right to examine any directly pertinent books, documents, and records of Consultant relating to the invoices submitted by Consultant pursuant to this Agreement.

21. **Contractor Safety Standards and Human Resources Policies.** OC San requires Consultant, its subconsultants, and its subcontractors to follow and ensure their employees follow all Federal, State, and local regulations as well as Contractor Safety Standards while working at OC San locations. If, during the course of the Agreement, it is discovered that Contractor Safety Standards do not comply with Federal, State, or local regulations, the Consultant is required to follow the most stringent regulatory requirement at no additional cost to OC San. Consultant, its subconsultants, and all of their employees shall adhere to all applicable Contractor Safety Standards in Exhibit "D" and the Human Resources Policies in Exhibit "E." While on OC San premises, Consultant, its subcontractors, and all of their employees shall comply with all applicable OC San's work rules and policies, including OC San's security procedures.

22. **Insurance.** Consultant and all its subconsultants shall purchase and maintain, throughout the term of this Agreement and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Exhibit "C" – Determined Insurance Requirement Form. Consultant shall not commence work under this Agreement until all required insurance is obtained in a form acceptable to OC San, nor shall Consultant allow any subconsultant to commence service pursuant to a subcontract until all insurance required of the subconsultant has been obtained. Failure to obtain and maintain the required insurance coverage shall result in termination of this Agreement.

23. **Indemnification and Hold Harmless Provision.** Consultant shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or may be caused by Consultant's Services under this Agreement, or by its subconsultant(s), or by anyone directly or indirectly employed by Consultant, and whether such damage or injury shall accrue or be discovered before or after the termination of the Agreement. Except as to the sole active negligence of or willful misconduct of OC San, Consultant shall indemnify, protect, defend, and hold harmless OC San, its elected and appointed officials, officers, agents, and employees from and against any and all claims, liabilities, damages, or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person, or damage to property, or interference with the use of property arising out of or in connection with Consultant's performance under the Agreement, and/or (b) on account of use of any copyrighted or uncopyrighted material, composition, or process; or any patented or unpatented invention, article, or appliance furnished or used under the Agreement, and/or (c) on account of any goods and services provided under this Agreement. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Consultant or anyone employed by or working under Consultant. To the maximum extent permitted by

law, Consultant's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are meritless, or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent, or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage, or injury. Consultant agrees to provide this defense immediately upon written notice from OC San, and with well qualified, adequately insured, and experienced legal counsel acceptable to OC San. This section shall survive the expiration or early termination of the Agreement.

24. **Independent Contractor.**
    24.1 The relationship between the Parties hereto is that of an independent contractor and nothing herein shall be construed as creating an employment or agency relationship.

    24.2 During the performance of this Agreement, Consultant and its officers, employees, and agents shall act in an independent capacity and shall not act as OC San's officers, employees, or agents. OC San assumes no liability for Consultant's action and performance nor assumes responsibility for taxes, funds, payments, or other commitments, expressed or implied, by or for Consultant.

    24.3 Consultant shall not be considered an agent of OC San for any purpose whatsoever nor shall Consultant have the right to, and shall not, commit OC San to any agreement, contract, or undertaking. Consultant shall not refer to the existence of this Agreement or use OC San's name in its promotional material or for any advertising or publicity purposes without OC San's prior expressed written consent.

    24.4 Consultant shall not be entitled to any benefits accorded to those individuals listed on OC San's payroll as regular employees including, without limitation, worker's compensation, disability insurance, vacation, or holiday or sick pay. Consultant shall be responsible for providing, at Consultant's expense, disability, worker's compensation, and other insurance as well as licenses and permits usual or necessary for conducting the Services hereunder.

    24.5 Consultant shall be obligated to pay any and all applicable Federal, State, and local payroll and other taxes incurred as a result of fees hereunder. Consultant hereby indemnifies OC San for any claims, losses, costs, fees, liabilities, damages, or penalties suffered by OC San arising out of Consultant's breach of this provision.

    24.6 Consultant shall not be eligible to join or participate in any benefit plans offered to those individuals listed on OC San's payroll as regular employees. Consultant shall remain ineligible for such benefits or participation in such benefit plans even if a court later decides that OC San misclassified Consultant for tax purposes.

25. **Subcontracting and Assignment.** Consultant shall not delegate any duties nor assign any rights under this Agreement without the prior written consent of OC San. Any such attempted delegation or assignment shall be void.

26. **No Solicitation of Employees.**
    26.1 Consultant agrees that it shall not, during the term of this Agreement and for a period of one (1) year immediately following expiration or termination of this Agreement or any extension hereof, call on, solicit, or take away any of the employees whom Consultant became aware of as a result of Consultant's Services to OC San.

26.2 Consultant acknowledges that OC San's employees are critical to its business and OC San expends significant resources to hire, employ, and train employees. Should Consultant employ or otherwise engage OC San's employees during the term of this Agreement and for a period of one (1) year following expiration or termination of this Agreement, Consultant shall pay OC San fifty percent (50%) of the former employee's most recent annual salary earned at OC San to accurately reflect the reasonable value of OC San's time and costs. This payment is in addition to any other rights and remedies OC San may have at law.

27. **Confidentiality and Non-Disclosure.**
   27.1 Consultant acknowledges that, in performing the Services hereunder, OC San may have to disclose to Consultant, orally and in writing, certain confidential information that OC San considers proprietary and has developed at great expense and effort.

   27.2 Consultant agrees to maintain in confidence and not disclose to any person, firm, or corporation, without OC San's prior written consent, any trade secret, confidential information, knowledge, or data relating to the products, process, or operation of OC San.

   27.3 Consultant further agrees to maintain in confidence and not to disclose to any person, firm, or corporation any data, information, technology, or material developed or obtained by Consultant during the term of this Agreement.

   27.4 Consultant agrees as follows:

   27.4.1 To use the confidential information only for the purposes described herein; to not reproduce the confidential information; to hold in confidence and protect the confidential information from dissemination to and use by anyone not a party to this Agreement; and to not use the confidential information to benefit itself or others.

   27.4.2 To restrict access to the confidential information to its subconsultant or personnel of Consultant who (1) have a need to have such access and (2) have been advised of and have agreed in writing to treat such information in accordance with the terms of this Agreement.

   27.4.3 To return all confidential information in Consultant's possession upon termination of this Agreement or upon OC San's request, whichever occurs first.

   27.4.4 To hold in confidence information and materials, if any, developed pursuant to the Services hereunder.

   27.4.5 The provisions of this section shall survive termination or expiration of this Agreement and shall continue for so long as the material remains confidential.

28. **Non-Liability of OC San Officers and Employees.** No officer or employee of OC San shall be personally liable to Consultant, or any successor-in-interest, in the event of any default or breach by OC San or for any amount which may become due to Consultant or to its successor, or for breach of any obligation under the terms of this Agreement.

29. **Third-Party Rights.** Nothing in this Agreement shall be construed to give any rights or

benefits to anyone other than OC San and Consultant.

30. **Applicable Laws and Regulations.** Consultant shall comply with all applicable Federal, State, and local laws, rules, and regulations. Consultant also agrees to indemnify and hold OC San harmless from any and all damages and liabilities assessed against OC San as a result of Consultant's noncompliance therewith. Any provision required by law to be included herein shall be deemed included as a part of this Agreement whether or not specifically included or referenced.

31. **Licenses, Permits, Ordinances, and Regulations**. Consultant represents and warrants to OC San that it has obtained all licenses, permits, qualifications, and approvals of whatever nature that are legally required to provide the Services. Any and all fees required by Federal, State, County, City, and/or municipal laws, codes, and/or tariffs that pertain to the work performed under this Agreement will be paid by Consultant.

32. **Regulatory Requirements.** Consultant shall perform all work under this Agreement in strict conformance with applicable Federal, State, and local regulatory requirements including, but not limited to, 40 CFR 122, 123, 124, 257, 258, 260, 261, and 503, Title 22, 23, and Water Codes Division 2.

33. **Environmental Compliance.** Consultant shall, at its own cost and expense, comply with all Federal, State, and local environmental laws, regulations, and policies which apply to the Consultant, its subconsultants, subcontractors, and the Services, including, but not limited to, all applicable Federal, State, and local air pollution control laws and regulations.

34. **Dispute Resolution.**
    34.1 In the event of a dispute as to the construction or interpretation of this Agreement, or any rights or obligations hereunder, the Parties shall first attempt, in good faith, to resolve the dispute by mediation. The Parties shall mutually select a mediator to facilitate the resolution of the dispute. If the Parties are unable to agree on a mediator, the mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Agreement, through the alternate dispute resolution procedures of Judicial Arbitration through Mediation Services of Orange County ("JAMS"), or any similar organization or entity conducting an alternate dispute resolution process.

    34.2 In the event the Parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to Code of Civil Procedure, Part 3, Title 9, sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or in the absence of agreement, each party shall select an arbitrator, and those two (2) arbitrators shall select a third. Discovery may be conducted in connection with the arbitration proceeding pursuant to Code of Civil Procedure section 1283.05. The arbitrator, or three (3) arbitrators acting as a board, shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in the Superior Court for the County of Orange, with a right of appeal from any judgment issued therein.

35. **Remedies.** In addition to other remedies available in law or equity, if the Consultant fails to make delivery of the goods or Services or repudiates its obligations under this Agreement, or if OC San rejects the goods or Services or revokes acceptance of the goods or Services,

OC San may (a) cancel the Agreement; (b) recover whatever amount of the purchase price OC San has paid, and/or (c) "cover" by purchasing, or contracting to purchase, substitute goods or services for those due from Consultant. In the event OC San elects to "cover" as described in (c), OC San shall be entitled to recover from Consultant as damages the difference between the cost of the substitute goods or services and the Agreement price, together with any incidental or consequential damages.

36. **Force Majeure.** Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government, or any other cause beyond its control, but the affected party shall use reasonable efforts to minimize the extent of the delay. Work affected by a force majeure condition may be rescheduled by mutual consent of the Parties.

37. **Termination.**

37.1 OC San reserves the right to terminate this Agreement for its convenience, with or without cause, in whole or in part, at any time, by written notice from OC San. Upon receipt of a termination notice, Consultant shall immediately discontinue all work under this Agreement (unless the notice directs otherwise). OC San shall thereafter, within thirty (30) days, pay Consultant for work performed (cost and fee) through the date of termination. Consultant expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Agreement. Such notice of termination shall terminate this Agreement and release OC San from any further fee, cost, or claim hereunder by Consultant other than for work performed through the date of termination.

37.2 OC San reserves the right to terminate this Agreement immediately upon OC San's determination that Consultant is not complying with the Scope of Work requirements, if the level of service is inadequate, or for any other default of this Agreement.

37.3 OC San may also immediately terminate this Agreement for default, in whole or in part, by written notice to Consultant:

- if Consultant becomes insolvent or files a petition under the Bankruptcy Act; or
- if Consultant sells its business; or
- if Consultant breaches any of the terms of this Agreement; or
- if the total amount of compensation exceeds the amount authorized under this Agreement.

37.4 All OC San's property in the possession or control of Consultant shall be returned by Consultant to OC San on demand or at the expiration or termination of this Agreement, whichever occurs first.

37.5 Consultant shall deliver to OC San all work product currently in existence and for which payment has been made.

37.6 Transition Services. Upon termination or expiration of this Agreement, Consultant will cooperate with OC San to assist with the orderly transfer of services, functions, and operations to another provider or to OC San as determined by OC San in its sole discretion. Prior to the termination or expiration of this Agreement, OC San may require Consultant to perform those transition services described below that OC San deems necessary to migrate Consultant's work to another provider or to OC San. Transition services may include, but are not limited to the following:

37.6.1 <u>Pre-Migration</u>
    34.6.1.1 Working with OC San to jointly develop a mutually agreed upon transition services plan to facilitate the termination of the Services;
    34.6.1.2 Notifying all affected vendors and subconsultants; and
    34.6.1.3 Freezing all non-critical changes to the System.

37.6.2 <u>Migration and Post-Migration</u>
    34.6.2.1 Performing the transition services plan activities;
    34.6.2.2 Answering questions regarding the Services performed by Consultant and the System on an as-needed basis; and
    34.6.2.3 Providing such other reasonable services needed to effectuate an orderly transition to a new system.

38.   **Attorney's Fees.** If any action at law or in equity or if any proceeding in the form of an Alternative Dispute Resolution (ADR) is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which the prevailing party may be entitled.

39.   **Waiver.** The waiver by either party of any breach or violation of, or default under, any provision of this Agreement, shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Agreement or default thereunder. Any breach by Consultant to which OC San does not object shall not operate as a waiver of OC San's rights to seek remedies available to it for any subsequent breach.

40.   **Severability.** If any section, subsection, or provision of this Agreement, or any agreement or instrument contemplated hereby, or the application of such section, subsection, or provision is held invalid, the remainder of this Agreement or instrument in the application of such section, subsection, or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.

41.   **Survival.** The provisions of this Agreement dealing with payment, transition of Services, confidentiality and non-disclosure, warranty, indemnity, and forum for enforcement shall survive expiration or early termination of this Agreement.

42.   **Governing Law.** This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in the County of Orange in the event any action is brought in connection with this Agreement or the performance thereof.

43.   **Notices.**
43.1 All notices under this Agreement must be in writing. Written notice shall be delivered by personal service, by electronic telecommunication, or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or the inability to deliver because of changed address for which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand, or request sent. All notices shall be effective when first received at the following addresses:

        OC San: Donald Herrera

Senior Buyer
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
DHerrera@ocsan.gov

Consultant: Subir Bhattacharjee
Chief Executive Officer
IntelliFlux Controls, Inc.
4667 MacArthur Blvd., Suite 400
Newport Beach, CA 92660
subir@ifctrl.com

43.2 Each party shall provide the other party written notice of any change in address as soon as practicable.

44. **Read and Understood.** By signing this Agreement, Consultant represents that it has read and understood the terms and conditions of the Agreement.

45. **Successors and Assigns.** This Agreement is binding on and inures to the benefit of the Parties and their respective successors and assigns.

46. **Authority to Execute.** The persons executing this Agreement on behalf of the Parties warrant that they are duly authorized to execute this Agreement and that by executing this Agreement, the Parties are formally bound.

47. **Entire Agreement.** This Agreement constitutes the entire agreement of the Parties and supersedes all prior written or oral communications and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.

[Intentionally left blank. Signatures follow on the next page.]

IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Agreement to be signed by their duly authorized representatives.

ORANGE COUNTY SANITATION DISTRICT

Dated: _____   By: _____
                                  Marshall Goodman
                                  Chair, Operations Committee

Dated: _____   By: _____
                                  Kelly A. Lore
                                  Clerk of the Board

Dated: _____   By: _____
                                  Ruth Zintzun
                                  Finance & Procurement Manager

INTELLIFLUX CONTROLS, INC.

Dated: _____   By: _____
                                  Subir Bhattacharjee
                                  Chief Executive Officer

JSK

EXHIBIT A

SCOPE OF WORK

For

Process Simulation Model Development for the Central Generation Facilities

EXHIBIT A
SCOPE OF WORK
PROCESS SIMULATION MODEL DEVELOPMENT
FOR THE CENTRAL GENERATION FACILITIES
SPECIFICATION NO. CS-2023-1404BD

1. <u>BACKGROUND</u>

The Central Power Generation Facilities (Cen Gen) at the Orange County Sanitation District (OC San) Treatment Plant No. 1 and Plant No. 2 were completed in 1993, and house Cogeneration facilities, providing power and heat to support miscellaneous wastewater processes. At the heart of these facilities are three (3) Stationary Reciprocating Internal Combustion Engine-generator Sets (gensets) at Plant No. 1, and five (5) at Plant No. 2. To support the operation of the gensets and the wastewater process as a whole, various types of process equipment such as pumps, heat exchangers, pressure vessels, piping, and valves are utilized.

Having been in operation for over 20 years, the Cen Gen process and equipment have degraded and been adapted to support the ongoing operational needs. In order to characterize the Cen Gen processes and equipment as a whole system, the creation of a process simulation, digital twin, or process model is proposed. The main project deliverable from this project scope will be a process model that is designed and validated, as detailed herein, to facilitate ongoing operational needs, maintenance and process improvements, process deficiency identification, and equipment performance optimization.

1.1 DEFINITIONS

A. As Found – shall mean the state the item is provided to the Consultant
B. As Left – shall mean the state the item is provided by the Consultant
C. ASME – The American Society of Mechanical Engineers
D. ASTM – The American Society for Testing and Materials
E. Cen Gen – Central Power Generation Facilities
F. Days – Calendar days unless otherwise noted
G. Fitness – refers to every aspect of the item that defines its physical, chemical, or electrical nature, size, makeup, etc.
H. Fit up – pertaining to the interaction, fitness, clearance, proximity, etc. between faying surfaces, conjoining, mating, and/or related parts.
I. Genset – Engine Generator Set
J. In service – A state of equipment being in operation.
K. LOTO – Lock-Out / Tag-Out (denoting applicable safety protocol)
L. NEW – shall mean virgin materials only, unused, unrecycled, unopened, and unadulterated
M. OC San – Orange County Sanitation District
N. OEM – Original Equipment Manufacturer
O. O&M – Operations and Maintenance
P. On Stream – a condition wherein the process and equipment is in live operation mode
Q. P&ID – Process (or Piping) and Instrumentation Diagram
R. psig – pound(s) per square inch gauge (typically denoting pressure)
S. Plant No. 1 – The Wastewater Treatment Plant located at 10844 Ellis Ave, Fountain Valley, CA 92708
T. Plant No. 2 – The Wastewater Treatment Plant located at 22212 Brookhurst St, Huntington Beach, CA 92646
U. Ra – Roughness Average (measured in units of microinches or 1×10^{-6} inch)
V. Safety Device – Pressure Safety/Relief Valve, etc.
W. Shutdown – When a piece of equipment is taken out of service.
X. SOW – Scope of Work
Y. Useful Life – The useful life of a component, assembly, etc. is defined as the limit by which said device would fail before its next regularly scheduled overhaul.

1.2 APPENDICES AND REFERENCE DRAWINGS

    A.   A-1 Plant No. 1 Cen Gen P&ID
    B.   A-2 Plant No. 2 Cen Gen P&ID
    C.   A-3 Plant No. 1 Control Center P&ID
    D.   A-4 Plant No. 1 Laboratory Building P&ID
    E.   A-5 Plant No. 1 Administration Building P&ID
    F.   A-6 Plant No. 1 Supplemental Steam Boilers and Digesters P&ID
    G.   A-7 Plant No. 2 Supplemental Steam Boilers and Digesters P&ID

2. DESCRIPTION OF WORK

The work detailed herein involves the creation and validation of at least two (2) independent and comprehensive software process models (i.e. one (1) model for each plant) that encompass all major and related subordinate processes, originating and ending at Cen Gen. This shall include the hot water and chilled water loops, their respective Boilers and Chillers, and related processes only as they directly influence Cen Gen processes (e.g. Digesters, Control Center Boiler and Chiller, Laboratory Building Boilers, and Administration Building Chiller at Plant No. 1) as illustrated in Appendix A-6 and A-7.

The software model and all related files shall be surrendered and provided to OC San as a project deliverable at the end of the project, once the model has been validated and determined to be satisfactory per the objectives detailed herein. The Consultant shall provide all necessary expertise, labor, testing, data gathering, or as otherwise required to perform the work detailed herein.

2.1 PROCESS MODEL CREATION

The Consultant shall create a software based steady-state or on-stream process model (see section **2.2 SOFTWARE RELATED**) to accurately simulate (see section **2.3 PROCESS MODEL VALIDATION**), **2.3** characterize, and predict, model, and/or monitor the following Cen Gen processes, auxiliary processes, equipment reliability, and overall system performance, at Plant No. 1 and Plant No. 2, as depicted in Appendices A-6 & A-7, at a minimum:

    A.   Internal Combustion Engine & Power Generation Systems
    B.   Engine Heat Recovery Systems
    C.   Engine Oil Cooler Systems
    D.   Engine Closed Loop Cooling Systems
    E.   Engine Exhaust Systems
    F.   Engine Fuel Supply Systems
    G.   Cooling Water Systems
    H.   Hot Water Systems
    I.   Steam, Boiler, and Feedwater Systems
    J.   Absorption Chiller and Chilled Water System (Plant No. 1)
    K.   Steam Turbine & Power Generation System (Plant No. 2)
    L.   Administration Building Interconnected Systems (Plant No. 1)
    M.   Laboratory Building Interconnected Systems (Plant No. 1)
    N.   Control Center Interconnected Systems (Plant No. 1)

2.2 SOFTWARE RELATED

Consultant solutions may include the development of software simulated chemical process mathematical models, and/or solutions comprised of proprietary software solutions, digital twins, artificial intelligence, or a combination thereof.

The software utilized shall be capable of providing all of the aspects detailed in this SOW and shall be an industry accepted software solution for this purpose. In addition, the software vendor shall provide engineering and software support, including access to free training modules, as part of their standard product offering at a minimum.

The Consultant shall include all costs for commissioning, licensing, software maintenance, personnel or otherwise in project proposals, noting the associated costs accordingly as applicable. In the event that the Consultant does not provide the software, and therefore will only provide the model files, please note that in your proposal.

The software, and related licensing agreements, that are required to run the developed Cen Gen process model or simulations shall be captured, but shown as a separate cost to the process model development. If they are unknown or not related to your solution, please note that in your proposal.

2.3 PROCESS MODEL VALIDATION

The Consultant shall validate the accuracy of the process model through field measurements, observations, employee consultations, or as otherwise required to accurately tune the model to predict process outputs within +/- 10% accuracy and repeatability (see Section 2.4 **PROCESS MODEL OUTPUTS**), or as otherwise approved in writing by the OC San Project Manager. The process model validation shall include documenting all of the validated process points, assumptions, pertinent model nuances, etc., and shall be recorded in the Section 2.5 **PROCESS MODEL VALIDATION REPORT**.

2.4 PROCESS MODEL OUTPUTS

The outputs of the process model shall accurately predict the following parameters and process stream variables, as detailed in Section **2.3 PROCESS MODEL VALIDATION** :
    energy production
    steam production
    hot water production
    engine power generation
    engine exhaust composition
    chilled water production (Plant No. 1)
    steam turbine power generation (Plant No. 2)
    stream flow rates
    stream pressures
    stream compositions
    supplemental boiler heat generation
    digester heat consumption
    heat exchanger efficiencies
    pump efficiencies
    pipe/valve pressure drops

 The process model data outputs shall be provided in U.S. Customary Units, or as otherwise approved in writing by the OC San Project Manager.

2.5 PROCESS MODEL VALIDATION REPORT

The Consultant shall compile a Process Model Validation Report for each Plant Process Model, two (2) in total. The reports shall include all of the data and information as required by Section 2.3 **PROCESS MODEL VALIDATION** and 2.4 **PROCESS MODEL OUTPUTS**.

3. **GENERAL**

The Consultant shall comply with the following general requirements.

All field work performed by the Consultant shall be completed in accordance with OEM instructions, and as required by the latest applicable industry codes and regulations as stipulated under this contract, unless otherwise approved by the OC San Project Manager in writing prior to work execution. The most stringent requirement shall take precedence if a conflict arises between any of the aforementioned project requirements..

A.   No OC San materials or equipment shall be taken off the site, without OC San's written authorization. Before removing any OC San owned property, the Consultant is to provide a list of parts being considered for removal and obtain approval by the OC San Project Manager. When parts are returned to OC San by the Consultant, an OC San representative must sign off on their receipt.

B.   Consultant shall provide field supervision, home office support, labor, permanent materials, construction equipment and tools, consumable supplies, transportation, testing, safety equipment and personnel protective equipment, temporary and support facilities, insurance, and any other items of expense required to perform all activities described herein. OC San will provide a suitable laydown area for this project, at each plant, as required.

C.   OC San shall assign a Technical Witness and/or an Inspector for all Consultant's activities, including but not limited to all readings taken and tests performed by the Consultant. The Consultant shall retake all readings or redo test if they are deemed unreliable or erroneous at OC San's sole discretion at no additional cost.

D.   The Consultant shall be responsible for the repair or replacement of any item, in-kind, damaged by the Consultant or their subcontractor(s) without any cost or schedule impact to OC San.

E.   The Consultant shall provide all tools, including lifting devices required to complete the Scope of Work.

F.   Cen Gen facilities will be in operation during the execution of the work, with other work possibly happening in close proximity, or at the same time, during execution of this contract. The Consultant shall coordinate all work to avoid any interference with normal plant operations, equipment maintenance, and other projects or processes happening simultaneously. The Consultant may be required to coordinate with other contractors that they may encounter during the execution of this contract, while working onsite.

4. **CONSULTANT RESPONSIBILITY**

4.1 GENERAL

The Consultant shall comply with the following general requirements, as applicable.

A.   The Consultant shall provide a project schedule acknowledge the key milestones for completion and biweekly update schedule showing a 3-week look ahead until completion.
B.   The Consultant shall provide all materials and/or equipment, which are specified or otherwise implied as required materials by this SOW and its Reference Drawings and attachments, unless stated otherwise herein as OC San Furnished Parts/Equipment.
C.   The Consultant shall provide all consumable supplies, transportation, testing, safety equipment, measuring or recording devices, and personal protective equipment.
D.   The Consultant shall be responsible for the repair or replacement of any item damaged by the Consultant or Consultant's subcontractor without any cost or schedule impact to OC San.

4.2 SAFETY AND HEALTH REQUIREMENTS

The Consultant and its Subcontractors shall comply with all applicable provisions of the OC San Safety Standards, Federal Occupational Safety and Health Administration (OSHA), California OSHA, and Local regulations, whichever is most stringent.

A. Injury and Illness Prevention Program - The Consultant shall submit a copy of their written, Injury and Illness Prevention Program (IIPP). The IIPP must address responsibility, compliance, communication, hazard assessment, incident investigation, hazard correction, and training as required by Title 8, California Code of Regulations, Section 3203.
B. Contractor Safety Orientation - The Consultant shall attend a Contractor Safety Orientation (CSO) meeting prior to the start of work. The CSO is a Sanitation District safety orientation conducted between the Risk Management Division (safety and health) and the Consultant. The CSO is conducted once per year or as job conditions or SOW changes. The Consultant shall participate in these meetings by providing work plans and other requested safety deliverables described below. The Consultant shall sign the JSSA documentation.

5. RESOURCES AVAILABLE

5.1 REFERENCE DRAWINGS

Access to the OEM O&M manuals, equipment specifications, and related procedures will be made available upon written request, if available.

5.2 PHYSICAL RESOURCES

OC San will make the following resources available to the Consultant, as required:

A. Access to electrical supply (120V), and single use compressed air hook-up (up to 90psi).

B. Restroom

C. The Consultant shall be responsible for providing the following at a minimum, for their own use:

   i. Breakroom(s)
   ii. Telephone(s)
   iii. Extension Cords or Power Supplies
   iv. Air Supply over 90psi, and/or more than single use

5.3 OC SAN STAFF

Consultant's staff shall be available to support the OC San's staff for LOTO and consultation during project work days between the hours of 0730 am to 1630 pm.

6. OVERALL PROJECT SCHEDULE

The Consultant shall provide a detailed schedule for this project listing all activities shown below. This schedule does not include all aspects, nor intricacies, of the required project reporting requirements. Rather, it is provided as a convenient reference for the Consultant to use as a basis for the required Deliverable—Overall Project Schedule.

ACTIVITY	Milestone Percent	Sample Schedule
Notice to Proceed (NTP)	-	NTP = Effective Date
Milestone No. 1 – Submittals - Safety Documentation - Project Schedule	15%	NTP + 28 Calendar Days
Milestone No. 2 – Process Model (Plant No. 1)	25%	NTP + 180 Calendar Days
Milestone No. 3 – Process Model (Plant No. 2)	25%	NTP + 180 Calendar Days
Milestone No. 4 – Validation Report	35%	NTP + 210 Calendar Days

Table 1. Milestone Schedule

7. DELIVERABLES

The following deliverables are in addition to the Process Model(s) and any other submittal requirements in the Contract:

7.1 SAFETY AND HEALTH

Refer to Section 4.2 **SAFETY AND HEALTH REQUIREMENTS** for detailed requirements that may require document submittals and subsequent approvals by the OC San Health and Safety Department.

7.2 PROJECT SCHEDULE

Consultant shall provide a baseline schedule as specified above, to include all activities, tests, equipment shutdowns as applicable.

A. Format: MS-Project and PDF.

B. Delivery: First, copy (Baseline Schedule). Subsequent updates as needed.

C. Three-Week Look Ahead Schedule Excel format and delivered at each progress meeting.

7.3 FINAL REPORT

The final report shall be the **PROCESS MODEL VALIDATION REPORT** in Section 2.5.

A. Report Document:

   1. Electronic Format: shall be formatted in Microsoft Word, Version 2013 or later.

   2. Content: shall contain a complete description of all tasks performed, all readings and measurements taken, pictures and findings, inspection and test results, and recommendations, as applicable.

B. Report Submittal Deadline

   1. All reports shall be provided not more than fourteen (30) days following the completion of the applicable equipment assessments.
   2. Final Report – The Final Report and compilation of all the necessary information, assessment reports, calibration data, data reports, etc., as detailed herein, shall be provided not more than fourteen (30) days following the completion of the contract work.

7.4 SUBMITTALS

    A. Format: Adobe PDF attachment sent with transmittal email to the OC San Project Manager

    B. Content: Refer to the following sections:

#	Submittal Requirement
1	Documentation per Safety and Health Requirements
2	Project Schedule
3	Final Report

8. PROJECT MANAGEMENT

8.1 MEETINGS

    A. Kick-off meeting: Prior to the commencement of work under this Contract, a meeting with OC San staff shall be held to establish appropriate contacts and review the Consultant's plan to implement this work.

    B. Biweekly progress meetings: Shall be held virtually and shall be attended by OC San staff and the Consultant. Topics for discussion: review work in progress and receive comments. Conferences shall be held at least every other week at OC San's offices, virtually, or as required to meet the project objectives in a timely manner. The formal agenda shall be submitted with the previous meeting notes at least one (1) week prior to each meeting with a three (3) week look ahead schedule.

8.2 WORK HOURS

When working on the OC San site, Consultant may work up to 9-hour shifts between the hours of 0700 and 1630, Monday through Thursday. No work shall be performed on Fridays thru Sundays, or OC San observed Holidays without prior written approval from the OC San Project Manager.

8.3 WORK OUTSIDE APPROVED PROJECT

All work outside the requirements of the Contract Documents will be considered "extra work" and shall be submitted in writing for review and written acceptance prior to execution.

9. MONITORING OF WORK

9.1 PROGRESS REPORTS

    A. The Consultant shall submit bi-weekly progress reports for review by the 1st and 15th of each month and shall include at a minimum:
      1. Current activities,
      2. Future activities,
      3. Potential out- of-scope items,
      4. Concerns and possible delays, and
      5. Percentage of completion.

10. WARRANTIES

A. The Consultant shall warrant that the work performed to be free of defects in materials and workmanship.

B. New OEM or equal parts shall be warranted for one (1) year and the Consultant shall be responsible for removal, installation, and shipping costs of replacement. Existing parts that are repaired, machined, or otherwise overhauled, shall be warranted for one hundred eighty (180) days and the Consultant shall be responsible for removal, installation and/or replacement, and shipping costs of replacement. The warranty against defects in workmanship shall extend for one hundred eighty (180) days and the Consultant shall be responsible for correcting the defective work.

C. All warranty periods shall begin after satisfactory completion of the work detailed herein.

10. STAFF ASSISTANCE

OC San will provide the Consultant with a single point of contact, the OC San Project Manager. All communications shall go through this single point of contact and any meetings and/or correspondence related to this SOW shall be scheduled and coordinated with this OC San representative.